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ABSTRACTS

FIBERS A

TIME DEPENDENCE OF MECHANICAL BREAKDOWN PHENOMENA. B. D. Coleman (E. I. du Pont de Nemours & Co.). J. Appl. Phys. 27: 862-866 (1956). (2805)

A phenomenological theory of the time dependence of mechanical breakdown phenomena is presented which is applicable to creep failure of oriented polymeric filaments under tensile stresses. 8 references.

TIME DEPENDENCE OF MECHANICAL BREAKDOWN IN BUNDLES OF FIBERS. PART 1. CONSTANT TOTAL LOAD. PART 2. THE INFINITE IDEAL BUNDLE UNDER LINEARLY INCREASING LOADS. PART 4. INFINITE IDEAL BUNDLE UNDER OSCILLATING LOADS. B. D. Coleman (E. I. du Pont de Nemours & Co.). J. Appl. Phys. 28: 1058-1064, 1065-1067 (1957); 1091-1099 (1958). (2806)

A previously published phenomenological theory of the statistics and time dependence of the creep failure of oriented polymeric filaments is applied to bundles of filaments. 14 references.

STOCHASTIC PROCESS MODEL FOR MECHANICAL BREAKDOWN OF FIBERS. B. E. Coleman. Trans. Soc. Rheol. 1: 153-168 (1951). Through BCIRA 38: 190 (1958). (2807)

A model is developed for discussing the time-dependence of mechanical strength measurements. This model is particularly applicable to polymeric fibers which show large time effects that are not accounted for by the classical "weakest-link" theories.

FRICTION OF FIBER ASSEMBLIES. J. D. Huffington. (Letter to the editor). Research 10, No. 4: 163-164 (1957). Through BCIRA 37: 458 (1957). (2808)

A theoretical expression is derived for the coefficient of friction for crossed fiber assemblies which shows that the coefficient should increase as the number of crossed fibers increases, the fiber diameter being kept constant. This result has been confirmed experimentally by measurements on nylon, polyvinyl chloride, and Terylene monofilaments. 7 references.

NATURAL FIBERS A 1

CROSS-LINKAGES IN WOOL: KEY TO MANY OF ITS PROPERTIES. R. W. Moncrieff. Wool Record 93: 1509, 1511 (June 19, 1958). (2809)

HOW EXCESSIVE DRYING DAMAGES SPINNING QUALITY. B. K. Power and W. E. Chapman. Cotton Gin & Oil Mill Press 59: 7-8 (July 12, 1958). (2810)

Effects of drying treatments on bale values of early, hand-snapped cotton before frost; and machine-stripped cotton, after frost, crop of 1956. Graph.

EFFECTS OF LINT CLEANING OF COTTON. J. S. St. Clair and A. L. Roberts. U. S. Agri. Mktg. Serv., Washington 25, D. C. May 1958. 37 p. Mktg. research report no. 238. Order from Superintendent of Documents, Washington 25, D. C. 25¢. (2811)

This study was undertaken to determine the effect of the lint cleaning of machine-picked cotton upon grade, bale value, and returns to farmers. Routine use of any of the four types of lint cleaners studied resulted, on the average for all bales, in reductions in average bale value when weight losses from lint cleaning were taken into account. Tables. Diagrams. 9 references.

STANDARDIZATION OF COTTON LINTERS. M. E. Whitten and H. R. Webb. U.S. Agri. Mktg. Serv., Washington 25, D. C. July 1958. 32 p. Mktg. research report no. 251. (2812)

URONIC ACIDS OF JUTE FIBER HEMICELLULOSE. H. C. Srivastava and G. A. Adams. (Letter to the editor). Chem. & Ind. No. 29: 920 (July 19, 1958). (2813)

JUTE TODAY. A. E. Haarer. Fibres 19: 167-169 (June 1958). (2814)

Some of the difficulties involved in the growing and marketing of jute fiber under present economic conditions are examined.

MANMADE FIBERS A 2

THERMAL PROPERTIES OF SYNTHETIC FIBERS: BALANCE OF ADVANTAGES. A. J. Hall. Texture 5: 77-82 (June 1958). (2815)

FIBERS NOTEBOOK. PART 6. Fibres 19: 197-198 (June 1958). (2816)

The structure, properties, and uses of Rhovyl (polyvinyl chloride), Vinyon HH (vinyl chloride-vinyl acetate copolymer), and Dynel (vinyl chloride-acrylonitrile copolymer) are summarized.

PROCESSING DU PONT NYLON STAPLE ON THE COTTON AND AMERICAN SYSTEMS. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. May 1958. 12 p. Bull. N-109 (replaces Bull. N-80). Free. (2817)

SOME FRICTIONAL PROPERTIES OF NYLON TOW. B. L. Rees (Brit. Nylon Spinners Ltd). (Letter to the editor). J Textile Inst. 49: T305-T308 (June 1958). (2818)

Results of experiments on the effect of surface temperature on the static friction of 6.6 nylon tow against surfaces with different degrees of surface roughness are reported. Graphs. 3 references.

PREPARATION OF PERLON STAPLE FIBERS OF FINER DENIER. E. Fritzsche and G. Odor. Faserforsch. u. Textiltech. 9, No. 1: 10-21 (1958). In German. Through BCIRA 38: 265 (1958). (2819)

The processing difficulties of Perlon staple fibers of the B-type, especially during carding, and their causes are described. Since the preparation of the fiber is found to play an important role, a new experimental method of preparation is described, in which titanium dioxide or aluminum is used, in solutions of synthetic tanning agents or certain dispersing agents, for impregnating the fibers. The reaction and the effect of the reaction products on the fiber are discussed.

CHANGES IN PROPERTIES OF POLYCAPROLACTAM FIBERS ON HEAT TREATMENT. G. Bodor. Faserforsch. u. Textiltech. 8, No. 12: 521-523 (1957). In German. Through BCIRA 38: 276 (1958). (2820)

Changes in the x-ray diagram, tensile strength, elongation, loop strength, refractive index, and dye uptake of stretched and unstretched polyamide fibers, subjected to heat treatment for half an hour and immediately cooled in a current of air to -60° C, were examined. The results are given in diagrams and discussed.

TECHNICAL AND PRODUCTION DATA OF PRINCIPAL SYNTHETIC FIBERS, AND METALLIC, STRETCH, AND BULK YARNS PRODUCED IN THE UNITED STATES. Am. Textile Reptr. 72: 55-80 (July 17, 1958). (2821)

This 1958 revision is presented in two sections: (1) technical and production data on principal synthetic fibers, and (2) facts on leading metallic, stretch, and bulk yarns. Names and addresses of manufacturers and licensees are given. Reprints are available from America's Textile Reporter, 286 Congress Street, Boston 10, Mass., at 50¢ each.

YARN PRODUCTION B

PROCESSING OF REGENERATED FIBERS ON THE WOOLEN SYSTEM. PART 3. YARN TESTS. H. Sneyd. Man-Made Textiles 34: 42-43 (July 1957). (2822)

Processing details for Courpleta/wool and Fibrolane/wool blends are briefly noted. Graphs are included to show the effect of blending percentages on yarn strength of Fibro, Fibroceta, Fibrolane, and Courpleta wool blends. For parts 1 and 2, see 1798/57.

MECHANIZATION OF FIBER MIXING. R. A. Gakel. Tekstil. Prom. 17, No. 10: 22-28 (1957). In Russian. Through BCIRA 38: 177 (1958). (2823)

PROCESSING PROPERTIES OF VISCOSE STAPLE FIBERS. S. M. Geisberg and N. K. Shemkov. Tekstil. Prom. 17, No. 10: 21-22 (1957). In Russian. Through BCIRA 38: 177 (1958). (2824)

Means are discussed for overcoming the main disadvantages of viscose staple fibers during their processing (stiffness, high slippage coefficient, low cohesion), with special reference to compositions, the application of which makes it possible to control the cohesion of the fibers.

SPINNING OF VISCOSE STAPLE FIBER. A. Beck. Textil-Praxis 13, No. 1: 15-18 (1958). In German. Through BCIRA 38: 178 (1958). (2825)

Some recommendations are given for treating the material on the individual machines (opener, card, drawframe, speed frame, ring spinning machine) so as to avoid difficulties during processing of 60 mm viscose staple, especially of the crimped type.

OILING OF MESTA. K. K. Chatterjee, P. K. Saha, K. K. Bhowmick, and S. B. Bandyopadhyay. Textile Mfr. 84: 299-301 (June 1958). (2826)

Results of some recent investigations on the effects of oiling on the processing of mesta are presented. 5 references.

SPINNING OILS. R. Bremme. Z. ges. Textil-Ind. 60, No. 6: 232-238 (1958). In German. Through BCIRA 38: 265 (1958). (2827)

Preparation (raw materials and their properties, emulsifiers, and the state in which the oils are supplied), use, and removal of spinning oils are discussed, with brief reference to the determination of residual fat.

DIFFICULTIES IN SPINNING COLORED AND BLEACHED COTTON YARNS. A. Beck. Z. ges. Textil-Ind. 60, No. 3: 107-109 (1958). In German. Through BCIRA 38: 267 (1958). (2828)

Experience has shown that flock-dyed or bleached cotton material causes more difficulties during spinning processing than bleached or dyed card sliver. Treatment of the card sliver during dyeing and bleaching, and processing of the dyed or bleached sliver on drawing frames, speed frames, and ring spinning machines are described.

EFFECT OF ROLLER VIBRATION ON YARN REGULARITY. H. Catling (Shirley Inst.). J. Textile Inst. 49: T279-T294 (June 1958). (2829)

The general nature and some causes of roller vibration are discussed briefly and a more detailed description of stick-slip roller vibrations is followed by a theoretical analysis of the effect of such vibrations on the fiber arrangement during drafting. For single-zone drafting systems, the effect of vibrations occurring at the input rollers and the delivery rollers is considered. The theoretical effect of vibrations of the intermediate rollers of 2-zone drafting systems is shown to be very great. Graphs. Diagrams. Tables. 6 references.

PNEUMATIC WASTE HANDLING IN THE NATURAL FIBER INDUSTRIES. G. Hargreaves (Wright Hargreaves Eng. Co. Ltd). Fibres 19: 173-174, 184 (June 1958). (2830)

OPENING, PICKING, FIBER PREPARATION B 1

MEASUREMENT OF THE STRIKING FORCE OF BEATER BLADES ON THE FIBER STRANDS IN PICKERS. N. N. Suslov. Tekstil. Prom. 17, No. 12: 13-15 (1957). In Russian. Through BCIRA 38: 177 (1958). (2831)

From the oscillograms and curves given for the force of beater blades, highly damaged fibers must be expected during processing of the raw material on pickers with three or four beaters on the cylinder, as a result of which the yield of long fibers decreases.

MODERNIZATION OF OPENING INSTALLATIONS IN COTTON SPINNING MILLS. L. Visscher. Industrie Textile: 711-716 (Oct. 1957). In French. Through BCIRA 38: 140 (1958). (2832)

Conversion of preparatory opening machinery and of its final picking points is discussed (with reference to the Bisinger system) and control methods used for the analysis of results affected by the regularity of picking rollers after their conversion are reviewed.

MODERNIZING THE OPENING PLANT IN A DUTCH COTTON SPINNING MILL. L. Visscher. Textil-Praxis (English ed.) No. 2: 49-55 (June 1958). (2833)

The effects of changes in the types of pre-openers and pickers used on nep count and uniformity are noted. Diagrams. Tables.

LAP IRREGULARITY IN THE BLOWING ROOM. J. Locke (Brit. Rayon Research Assoc.). Textile Recorder 76: 58-59, 68 (July 1958). (2834)

Long length lap irregularity caused by incorrect allowances for moisture content, irregularities of intermediate length caused by the inefficient operation of the regulator, and short term irregularities caused by disturbance of fiber tufts already deposited on the cages, and by faulty positioning of the regulator with respect to the striking point of the feed mechanism are discussed. Means for improving uniformity are suggested. Diagrams. Photograph.

CARDING AND COMBING B 2

ANTI-FRICTION COILERS. Saco-Lowell Shops. Saco-Lowell Bull. 30: 17-19 (June 1958). (2835)

The Saco-Lowell coiler gear is supported by three roller assemblies mounted on antifriction bearings. The rollers are nonmetallic and fit in a groove in the coiler gear. The ball bearings in the roller assemblies take the thrust in both directions, so that it does not matter whether the can is empty or full. The roller support assembly is grease packed for life. The coiler gear requires no lubrication of the gear teeth because it is driven by a nylon pinion on the vertical shaft. Diagrams. Photographs.

MORE UNIFORM DRAWING SLIVER FROM BIG CARD COILERS. Saco-Lowell Shops. Saco-Lowell Bull. 30: 40-47 (June 1958). (2836)

Tests relating to the packaging of card sliver, while investigating the cause of count variation in cloth relative to sliver uniformity at the breaker drawing frame, definitely show that card sliver coiled in a larger can with a larger coiler gear produces a significant improvement in the quality of the breaker drawing sliver. Diagrams. Photographs. Graphs.

MODERN FLAX SPINNING PRACTICE: TOW BLENDING AND BREAKING. Textile Recorder 76: 60-62 (July 1958). (2837)

The principle and operation of the breaker and finisher cards are described, and the importance of proper blending prior to carding is stressed. Diagrams.

OPTIMUM CARD PERFORMANCE FOR VISCOSE STAPLE FIBER. H. Junghans. Deut. Textiltech. 7, No. 12: 638-641 (1957). In German Through BCIRA 38: 177 (1958). (2838)

The carding process which, owing to the less dense structure and lower elongation and elasticity of the material, is carried out with the least stress on viscose staple fiber, is described and an example is given of an intensified fiber-protecting carding operation, by means of which a higher standard of carding efficiency is attained. The essential feature of this process consists in continuous feeding and spreading of the fibers on the card rollers and in surface active carding, which contributes to the preservation of fiber properties, better utilization of the material, and quality improvement of the product.

PRODUCTION OF ROVING ON CARDED WOOL CARD SET. PART 3. INTERACTION OF CARDS IN THE SET: PRINCIPLE OF EQUILIBRIUM BETWEEN THE OPENING AND EQUALIZATION CONDITIONS. E. Boroczy. Faserforsch. u. Textiltech. 8, No. 11: 458-467 (1957). In German. Through BCIRA 38: 140 (1958). (2839)

RIETER C. I. CARD DESIGN. J. Jacob Rieter & Co. Ltd. Man-Made Textiles 35: 60 (July 1958). (2840)

This new card has improved flat design, greater bend flexibility, large can coilers, and reinforced feed. Photograph.

CONVERSION OF THREE-ROLLER DRAWING FRAMES. A. P. Kurchenko. Tekstil. Prom. 17, No. 9: 42-43 (1957). In Russian. Through BCIRA 38: 141 (1958). (2841)

DRAWING AND ROVING B 3

MACHINE DESIGN DEVELOPMENT. Saco-Lowell Shops. Saco-Lowell Bull. 30: 35-39 (June 1958). (2842)

The development of the web enclosure for the Versamatic drawframe is traced as an example of the type of problems which must be overcome when a new machine is introduced to the market. Photographs.

STUDY ON DRAWFRAMES OF COTTON SPINNING MILLS. A. J. Haschke. Deut. Textiltech. 7, No. 12: 633-638 (1957). In German Through BCIRA 38: 178 (1958). (2843)

After a brief review of drawframe development, the difficulties encountered during high drafting and processing of slivers with increased thickness are critically examined. The air currents in the drawframe are considered to be the essential source of interferences during the drafting process. The flow conditions are described and suggestions made for the elimination of the adverse effects.

VERSA-MATIC DRAWING FRAME. Saco-Lowell Shops. Saco-Lowell Bull. 30: 60-64 (June 1958). (2844)

The outstanding features of the frame are described and illustrated.

DRAWING FRAME LV-2-32. B. P. Pozdnyakov. Tekstil. Prom. 17, No. 9: 27-28 (1957). In Russian. Through BCIRA 38: 141 (1958). (2845)

The frame differs from similar previous constructions by the presence of three metal pressure rollers on 5-, 4-, and 3-line rollers. These rollers are grooved; the number of the grooves varies and decreases from the 5- to the 3-line rollers. The pressure rollers are spring-weighted on all 5 lines of rollers. Two card slivers are coiled simultaneously.

CONDENSERS FOR ROVING AND SPINNING. Saco-Lowell Shops. Saco-Lowell Bull. 30: 56-59 (June 1958). (2846)

The long drafts and high speeds now generally used in both roving and spinning create an increase in the amount of fly and top clearer waste on the frames. Condensers help to keep the frames free of fly and lint, and also reduce the possibility of cloth defects due to the presence of short waste fibers in the yarn. The design and operation of the various types of Saco-Lowell condensers are described. Photographs.

SPINNING, WINDING, TWISTING B 4

ENDS-DOWN AND LOOM-STOP TESTING. N. L. Enrick. Modern Textiles Mag. 38: 34 (Apr. 1957). (2847)

Table for determining total number of breaks or stops which will save from 25 to 35% of testing time, with no loss in reliability, as against the older fixed-time-period method of ends-down and loom-stop testing.

SYNCHRONIZATION OF TENSIONING AND WINDING ON THE RING SPINNING MACHINE. L. Weller. Industrie Textile: 793-795 (Nov. 1957). In French. Through BCIRA 38: 141 (1958). (2848)

The system described for controlling the rotational speed of bobbins during winding-on comprises tappets fixed on the ratchet shaft and on the cam shaft of the machine, respectively. They ensure a constant basic speed, a slight increase of this speed regulated by the rotation of the ratchet, and a periodic variation of the speed regulated by the rotation of the cam and ratchet together. The mechanism is described and circuit diagrams are given.

FEEDING OF FIBERS: A PROBLEM OF TWO-ROLLER CONDENSER SPINNING. G. Schlese. Spinner u. Weber 75, No. 23: 1229-1232 (1957). In German (English translation). Through BCIRA 38: 112 (1958). (2849)

Means for eliminating differences in the amount of fibers fed, electrical stop motions and individual drives, special constructions (strippers), and new designs in the construction of feeders with automatic weighing means are reviewed, with reference to relevant patents.

AUTOSPIN JUTE SPINNING FRAME. Fairbairn Lawson Combe Barbour Ltd. Fibres 19: 171-172 (June 1958). (2850)

Features are described. Photographs.

SPEED-TEX MODEL 01C. Saco-Lowell Shops. Saco-Lowell Bull. 30: 5-7 (June 1958). (2851)

The Model 01C Speed-Tex ring was designed specifically for the Gwaltney frame because full utilization of its large ring diameters and long traverses was limited by conventional ring design. The flange contours of the ring provide a broad inner bearing surface and eliminate outer flange excess, so that a wide traveler may be used. Mill data comparing the 01C Speed-Tex with conventional rings are included.

SPEED-TEX RING. Saco-Lowell Shops. Saco-Lowell Bull. 30: 1-4 (June 1958). (2852)

The Speed-Tex ring is basically the Robbinette ring with a metallic alloy on the outside of the ring added for a minimum breaking-in period. Experiences in several actual mill tests indicate that only 5 or 6 traveler changes are required for 120 hr of operation during the breaking-in period. With older style rings from 50 to 100 traveler changes are often required. Other advantages are cited.

RECONSTRUCTION OF DRAFTING SYSTEMS OF COTTON SPINNING MACHINES. N. M. Belitsin. Tekstil. Prom. 17, No. 9: 23-27 (1957). In Russian. Through BCIRA 38: 141 (1958). (2853)

Seven different systems are described and illustrated.

MODERNIZATION OF DRAFTING SYSTEMS ON SPINNING MACHINES. I. S. Rozenson. Tekstil. Prom. 17, No. 12: 18-19 (1957). In Russian. Through BCIRA 38: 178 (1958). (2854)

The recommended modernization has appreciable technological and economical advantages. With increased draft (from 14 to 20-25) when processing medium-count yarns, about 8-10% of floor space is saved and the productivity is increased by 5%.

DANGERS OF HIGH DRAFTING. R. Schön. Textil-Praxis 12, No. 12: 1198-1200 (1957). In German. Through BCIRA 38: 113 (1958). (2855)

The causes of periodic yarn irregularities occurring during high draft spinning of medium and coarse counts are discussed and it is pointed out that these difficulties can be overcome or greatly reduced by using higher preliminary drafts. These require accurate adjustment of the width of the preliminary drafting zone to the fiber length or the use of additional guiding means.

SF-4B SPINNING FRAME. Saco-Lowell Shops. Saco-Lowell Bull. 30: 48-52 (June 1958). (2856)

The SF-4B is an improved drafting element adaptable to conventional frames for the spinning of worsted yarns, staple synthetics, and blends. Constructional features and operational data are covered. Photograph. Diagrams. Tables.

TWIST VARIATIONS IN FOLDED YARNS. R. Struve. Z. ges. Textil-Ind. 60, No. 3: 109-112; No. 4: 138-139 (1958). In German. Through BCIRA 38: 267 (1958). (2857)

Determination, causes, elimination, and control of twist variations due to tension conditions on the ring twisting machine, machine irregularities, and yarn count variations are discussed.

ALLGAUER ALLMAZI RING TWISTING MACHINE. H. Ebert. Spinner u. Weber 75, No. 24: 1320-1322 (1957). In German. Through BCIRA 38: 114 (1958). (2858)

Constructional details are given.

HIGH EFFICIENCY HAMEL RING TWISTING MACHINE. R. Liesegang. Spinner u. Weber 75, No. 23: 1234-1235 (1957). In German (English translation). Through BCIRA 38: 113 (1958). (2859)

The main features of the machine described are the frictionless sliding frame system, the narrow frame width (600 mm), and the new winding apparatus with counter dial for regulating the cop diameter.

NEW TWISTING MACHINE. Josef Pfenningsberg & Co. Spinner u. Weber 76, No. 2: 78-79 (1958). In German. Through BCIRA 38: 141 (1958). (2860)

The new fancy twisting machine (Pfenningsberg RZII/EDM), equipped with electronic control means, is described and illustrated.

REMARKS ON PERIODIC YARN VARIATIONS. O. König. Textil-Praxis 13, No. 1: 8-12 (1958). In German. Through BCIRA 38: 190 (1958). (2861)

It is shown that periodic irregulatiries, inevitably caused by the delivery rolls of drafting mechanisms on cotton ring spinning machines, become visible to the human eye at a certain magnitude (as a moiré effect). The visibility of the irregularities is greater in yarns with great uniformity and in the presence of a further periodic irregularity with similar wavelength. Although at the draft usually applied in the main zone of the drafting mechanism the periodic irregularities lie below the visibility threshold, they may considerably affect the yarn regularity. This is shown in an example by calculating the Uster value. A high draft in the main zone was found to be of greater advantage than a low one. It was proved experimentally that, with a new construction of the delivery top roller, it is possible to reduce the periodic irregularities by 50%.

IRREGULARITIES OCCURRING IN SPINNING. S. Kramer. Spinner u. Weber 75, No. 18: 946-948 (1957). In German. Through BCIRA 38: 113 (1958). (2862)

Statistical methods are discussed and illustrated by diagrams.

TRAVELER CLEANERS. Saco-Lowell Shops. Saco-Lowell Bull. 30: 53-55 (June 1958). (2863)

The pin type, Jenkes, Knight, and three types of blade cleaners (Saco-Lowell Pawtucket, Robbins, and reversible) are described and illustrated.

YARNS B 5

CONSTRUCTION OF TWISTED YARNS. PART 2. A. Wilhelm and J. G. Helli. Textil-Praxis 13, No. 1: 42-46 (1958). In German. Through BCIRA 38: 191 (1958). (2864)

Twisting-in and twist distribution, elongation and strength of the twisted yarn, and the theory of different utilization of the yarn substance are discussed and an example is given for the preparation of two different twisted yarn types of Nm 50/2, in which attention was paid to strength and volume, respectively.

EXPERIMENTAL STUDY OF YARN GEOMETRY. G. H. Tattersall (Brit. Rayon Research Assoc.). J. Textile Inst. 49: T295-T304 (June 1958). (2865)

Results of measurements of retraction and filament angles as a function of twist for single continuous-filament yarns are given and compared with the predictions of Treloar's theory. It is shown that the agreement for commercial yarns is quite good. Yarn twisted in 50 in. lengths on a laboratory machine is fundamentally different from commercial yarn, and results from it do not agree with the theory. Results of preliminary measurements on 2-ply cord are given. Graphs. Diagram. 2 references.

STRESS-STRAIN RELATIONSHIPS IN YARNS SUBJECTED TO RAPID IMPACT LOADING. PART 5. WAVE PROPAGATION IN LONG TEXTILE YARNS IMPACTED TRANSVERSELY. J. C. Smith, F. L. McCrackin, and H. F. Schiefer. J. Research Nat. Bur. Standards 60: 517-534 (May 1958). (2866)

ELASTIC YARNS. F. Fourné. Riv. Tessile 12, No. 11: 1111-1118 (1957). In Italian. Through BCIRA 38: 114 (1958). (2867)

In this review, the author describes the essential properties of crimped yarns and methods of their production, with special reference to the method combining twisting, fixing, and untwisting and the false-twist method. The effect of high twist on various yarn properties and defects and their causes are discussed. A table is given listing the main commercial products, their properties, type of raw material, producers, method of production, and structure of the yarn. 46 references.

SPINNING OF TUFTING YARNS FROM VISCOSE STAPLE FIBER BY THE COTTON SPINNING METHOD. P. Onnen. Textil-Praxis 13, No. 1: 12-14 (1958). In German. Through BCIRA 38: 179 (1958). (2868)

The development in the U. S. A. of pile yarn production for carpet weaving is discussed, with reference to the properties of the raw material, mixing, opening, carding, drawing, spinning, doubling, and winding. Brief comparison is made with the stage of development in Germany.

LOOP AND CURL YARNS: PROCESSING OF POPULAR TYPES. Wool Record 93: 1505, 1507 (June 19, 1958). (2869)

CEOLON POLYURETHANE FOAM YARNS. Skinner's Silk & Rayon Record 32: 747, 749 (July 1958).

Ceolon is made from a foamed polyurethane and has a specific gravity of about 0.035 g/cc. The yarn encloses a series of interconnected air pockets with a smaller proportion of insulated air cells. The woven or knitted fabric is air permeable and comfortable to wear. Polyurethane yarns are unaffected by soap, synthetic detergents, or the solvents used in drycleaning.

DEVELOPMENT OF HIGH TENACITY-HEAT STABLE DACRON PARACHUTE ITEMS. C. C. Chu, E. R. Kaswell, and D. J. Doull (Fabric Research Labs., Inc.). Wright Air Development Center, Wright-Patterson Air Force Base, Ohio. May 1958. 60 p. WADC tech. report 57-765. (2870)

The purpose of this program was to develop Dacron yarn, thread, webbing, tape, and cord fabricated from hot stretched-heat relaxed yarn for use in the fabrication of deceleration parachutes. A pilot machine was designed, constructed, and used for the production of HS-HR Dacron yarns and threads. Photographs. Tables. Graphs.

UNIFORMITY AND DYNAMOMETRIC PROPERTIES OF SYNTHETIC DRAWFRAME SLIVERS AND YARNS. W. Wegener and H. Meister. Reyon, Zellwolle u. Chemiefasern No. 10: 700-706; No. 11: 772-777 (1957). In German. Through BCIRA 38: 103 (1958). (2871)

Experiments have shown that drawframe slivers and yarns from chemical fibers with varying staple lengths show better properties than those with a constant staple length. This is expressed, in the case of drawframe slivers, in the drafting force curve, and the variation coefficients of the drafting force and the mass and, in the case of yarns, in the variation coefficients of breaking load and mass and the position of the length-variation curves. Blending of various staple lengths has no effect on the count and the electrostatic charge. No differences in the regularity and dynamometric properties were found as a result of spinning-oil and brightener application, but there were differences in the electrostatic charge between the treated and untreated materials.

FRICTION, LUBRICATION, AND WEAR OF SYNTHETIC FIBERS. D. Tabor. Wear 1, No. 1: 5-24 (1957-58). Through BCIRA 38: 31 (1958). (2872)

The first section of this paper deals with the friction of fibers and polymeric materials in general. It is shown that the frictional behavior depends both on the load and on the shape of the surfaces. This behavior is explained in terms of the adhesion theory of friction. In the second section the frictional wear of polymeric materials is discussed. A study of the surface damage produced supports the view that strong adhesion occurs at the regions of real contact, and that tearing and plucking of the surfaces take place during sliding. In section three some experiments on the boundary lubrication of polymers are described, and in the last section some recent work on the friction of yarns over cylindrical guides is outlined.

RELATIONSHIPS BETWEEN TWIST, TENSILE STRENGTH, ELONGATION AT BREAK, AND THE TWISTING MOMENT OF COTTON AND SPUN RAYON YARNS. K.-H. Banke. Faserforsch. u. Textiltech. 8, No. 12: 495-500 (1957). In German. Through BCIRA 38: 277 (1958). (2873)

Experiments on yarns from Soviet, Egyptian, and Chinese cotton, spun rayon, and 75% spun rayon/25% Perlon fiber showed the exponential dependence of the twisting moment upon the yarn twist, and made it possible to establish an empirical twist equation and to derive for the twist coefficient of the Koechlin formula a relationship which is a function of the count, the twisting moment, and the yarn twist and, thus, expresses the physical fiber properties. Its validity extends over the whole twist range of yarns.

EFFECT OF SPEED ON THE FRICTION BETWEEN YARN AND SOLID BODIES. E. Honegger. Bull. Inst. Textile France No. 69: 53-68 (Aug. 1957). In French. Through BCIRA 38: 129 (1958). (2874)

The friction coefficient depends upon the fiber quality, the twist, the diameter of the friction roller and the gliding speed of the yarn. It increases with increasing contact surface between the thread and the roller and with increasing speed, especially in the case of yarns from continuous filaments with low twist. The experiments mentioned in this report gave values for the friction coefficients of 8 different fibers and for a range of speeds up to 1,000 m/min.

FABRIC PRODUCTION C

WARPING, SLASHING, YARN PREPARATION C 1

MANTON GAULIN SIZE HOMOGENIZERS. P. Bouvard. Industrie Textile: 723-724 (Oct. 1957). In French. Through BCIRA 38: 144 (1958). (2875)

The following advantages are claimed for the Manton Gaulin homogenizer described: uniform and constant viscosity, use of ordinary untreated starch, considerably reduced amount of starch (by 10-20%), reduced steam consumption for heating the bath to a temperature of 80-85° C, possibility of storing the mixture without decomposition, reduced amount of fly, improved penetration of the size into the yarn, softer warps and excellent separation of the threads, and increased yield resulting from the lower number of breakages.

REMARKS ON COTTON SIZING. J. Constant. Rev. Textile 56, No. 8: 503-505 (1957). In French. Through BCIRA 38: 144 (1958). (2876)

The author discusses the composition and properties of various starches and reviews auxiliary sizing products (dressing, solubilizing, softening, plastifying, wetting and antiseptic agents). Brief reference is also made to the water hardness and the proportion of water used in relation to the sizing agents.

WARP SIZING. P. V. Seydel. W. R. C. Smith Publishing Co., 806 Peachtree Street, N. E., Atlanta 8, Ga. 1958. 505 p. $5.00. (2877)

Reprint of a recent series of articles in Textile Industries.

AUTOMATIC STOP MOTIONS WHEN CHEESES REACH THE DESIRED DIAMETER. PART 2. R. Burgholz. Textil-Praxis 12, No. 12: 1216-1220 (1957). In German. Through BCIRA 38: 116 (1958). (2878)

Various constructions are discussed and their advantages are pointed out.

REWINDING WARP YARN AT A HIGH VELOCITY. A. I. Borodin and N. S. Kopeikina. Tekstil. Prom. 17, No. 10: 38-40 (1957). In Russian. Through BCIRA 38: 180 (1958). (2879)

Experiments have shown that it is possible to increase the winding velocity to up to 800 m/min (without increasing the number of breakages) by placing the cop at a suitable distance from the thread guide, at a cone to winding-diameter ratio of not less than 1.2.

WEAVING C 2

MAKING E-MODEL DRAPER LOOM BRAKES MORE EFFECTIVE. Textile World 108: 62, 126-128 (July 1958). (2880)

Directions for correctly setting the external pressure brake of the E-model loom are given. Diagram.

EASY STARTING OF THE LOOM. A. Versat. Industrie Textile: 897-900 (Dec. 1957). In French. Through BCIRA 38: 145 (1958). (2881)

A detailed description is given of the arrangement developed by the Soc. Métapic, in which a flywheel is introduced, capable of momentarily assisting the motor to overcome the moment of inertia. This flywheel is automatically disengaged after starting.

REVIEW OF GERMAN LOOM CONSTRUCTIONS. PART 9. B. Hesse. Spinner u. Weber 76, No. 2: 81-82 (1958). In German. Through BCIRA 38: 144 (1958). (2882)

LOOMS WITH MODERN AUTOMATIC SHUTTLE-CHANGE MOTIONS. J. Deussen and E. Meyer. Spinner u. Weber 75, No. 23: 1254-1256 (1957). In German (English translation). Through BCIRA 38: 117 (1958). (2883)

AUSTRIAN AUTOMATIC LOOM. B. Hesse. Spinner u. Weber 76, No. 4: 173 (1958). In German. Through BCIRA 38: 268 (1958). (2884)

The Rüsch automatic loom, the basic construction of which does not differ from standard designs, has a few characteristic features, e.g. an especially effective inner shoe brake which stops the loom immediately on breakage of the thread, a ratchet lever arranged at the back of the loom, and a spring reverse motion.

COMBINED OPEN SHED AND CLOSED SHED WEAVES. J. Boudet. Industrie Textile: 734-736 (Oct. 1957). In French. Through BCIRA 38: 145 (1958). (2885)

The mechanism described for the production of fabrics with combined weaves utilizes the advantages of the closed-shed and open-shed dobbies and eliminates their disadvantages. Illustrations are given.

DOUBLE-LIFT JACQUARD LOOMS WITH OPEN SHED. H. Maier. Textil-Praxis (English ed.) No. 2: 60-63 (June 1958). (2886)

The construction, operation, and advantages are described. Photographs. Diagram.

NEUMANN GRIPPER SHUTTLE LOOM: WEAVING WITHOUT A PIRN. VEB Webstuhlbau. Skinner's Silk & Rayon Record 32: 728-730 (July 1958). (2887)

Features of the loom are described in detail. Photographs. Diagrams.

WEAVING AND WORKING CONDITIONS. R. Thirion. Industrie Textile: 729-733 (Oct. 1957). In French. Through BCIRA 38: 170 (1958). (2888)

The MTM work study method is applied in analysis of filling the shuttle (by the old and new method, respectively), finding the broken weft, piecing up the broken end, and changing the shuttle on ordinary looms by hand.

MEASUREMENT OF WEFT TENSION ON THE WORKING LOOM WITH A PIEZOELECTRIC DEVICE. W. Löbel. Faserforsch. u. Textiltech. 8, No. 12: 500-504 (1957). In German. Through BCIRA 38: 269 (1958). (2889)

The apparatus consists of a quartz transmitter, a dc voltage amplifier, and a loop oscillograph for registering frequencies up to 1,600 hertz. The piezo-tensions occurring at the transmitter are directly and linearly proportional to the mechanical tensions. The time-constant amounts to several minutes because of the high initial resistance of the amplifier (10^{11} ohm). All tension impulses lasting longer than 0.5 millisecond (corresponding to a force of 100 p) can be measured with good approximation.

MEASUREMENTS AND INVESTIGATIONS ON THE LOOM. W. Frenzel and S. Miersch. Faserforsch. u. Textiltech. 8, No. 12: 504-520 (1957). In German. Through BCIRA 38: 269 (1958). (2890)

Review of devices measuring warp and weft tensions, shuttle movements, shed formation, lay movement, optimum loom setting, etc. Some directions are given for further research work. 94 references.

WEAVING TERRY TOWEL FABRICS. PART 4. H. Barlow. Textile Recorder 76: 63-65 (July 1958). (2891)

The various types of cloth takeup motions, warp letoff motions, vibrators, warp beam weighting motions, and positive terry warp delivery motions are discussed. Diagrams.

SOME DEVELOPMENTS IN AUTOMATIC WEFT REPLENISHMENT. D. Brunnschweiler (Univ. of Manchester). J. Textile Inst. 49: P222-P228 (June 1958). (2892)

Recent developments affecting automatic pirn transfer on multiple and single shuttle looms are discussed, together with the weft supply used on looms weaving from stationary weft packages. Diagrams. 14 references.

EFFECT OF LOOM SPEED ON CONDITIONS OF WEFT BEATUP. V. N. Vasilchenko. Tekstil. Prom. 17, No. 12: 23-26 (1957). In Russian. Through BCIRA 38: 181 (1958). (2893)

Results of the study on the effect of loom speed on the beatup conditions and the calculation formulas suggested for determining the moment of inertia of the lay can be utilized in experiments on increasing the loom speed. Calculations for cotton fabrics showed that, by increasing the loom speed from 200 to 260 rpm and the irregularity coefficient of the lay turn from 15 to 60%, it is possible to decrease the moment of inertia of the lay mass (essential for the beatup) by more than a half. This is extremely important for decreasing the stress as a result of inertia forces during operation of the lay mechanism.

FIGURED FABRICS ON THE AUTOMATIC LOOM. H. Petzold. Textil-Praxis (English ed.) No. 2: 65-68 (June 1958). (2894)

ELEMENTS AND UNITS FOR SHED FORMATION. J. Schneider. Z. ges. Textil-Ind. 60, No. 1: 34-39; No. 3: 112-114 (1958). In German. Through BCIRA 38: 269 (1958). (2895)

The shedding mechanisms of jacquard machines are described and illustrated.

DEVELOPMENT OF THE DOBBY GEAR ON DOUBLE SHED LOOMS. H. Osswald. Textil-Praxis (English ed.) No. 2: 68-71 (June 1958). (2896)

The steps leading to the development of the Tonnar double lift dobby are enumerated, and the construction and operation of the Tonnar dobby are described. Photograph. Diagrams.

AUTOMATIC DIEDERICHS LOOM WITH FOUR SHUTTLES. Industrie Textile: 807-815 (Nov. 1957). In French. Through BCIRA 38: 145 (1958). (2897)

The text and the constructional data refer to control means for the shuttle change motion of the Diederichs loom CRK.

DEFECTS DURING TRANSFER OF BOBBINS IN AUTOMATIC LOOMS: CAUSES AND REMEDIES. H. Maier. Textil-Praxis (English ed.) No. 2: 72-75 (June 1958). (2898)

KNITTING C 3

KNITTING QUALITY INCENTIVES. J. H. Blore. Textile World 108: 72-75 (June 1958). (2899)

This report on what mills throughout the nation are doing about quality incentives includes samples of some typical quality reports.

KNITTING QUALITY CONTROL METHODS. J. H. Blore. Can. Textile J. 75: 61-63 (May 2, 1958). (2900)

The application of statistical quality control, quality incentive systems, stitch control methods, and preventive maintenance programs in knitting mills is briefly outlined.

PRODUCTION PLANNING ON INTERLOCK MACHINES. K. Mamnicki. Hosiery Trade J. 65: 72-74 (July 1958). (2901)

A procedure for assessing and establishing a standard of productivity for a set of interlock machines in a plant is explained and illustrated.

MELLOR BROMLEY TYPE 4/SMHO LATCH NEEDLE FLEECY MACHINE. Mellor Bromley & Co. Ltd. Hosiery Trade J. 65: 90-91 (July 1958). (2902)

Backed or fleecy fabric is produced on this machine. The backing or fleecy thread is bound into selected knitted stitches by passing between the two plain loops of each of these stitches. Photographs.

FIGURE DESIGNING ON CIRCULAR MACHINES. J. B. Lancashire. Hosiery Trade J. 65: 66-69 (July 1958). (2903)

The use of ribbon, punched paper, and multiple step mechanisms for extending the depth of the design area without patterning spirality. Photographs.

FAULTS IN WARP KNITTED FABRICS. PART 4. INCORRECT ADJUSTMENT OF KNITTING ELEMENTS AND MOTIONS. Hosiery Trade J. 65: 78-81 (July 1958). (2904)

ELIMINATING A FAULT IN WARP-KNITTED FABRIC. D. G. B. Thomas (Brit. Rayon Research Assoc.). Man-Made Textiles 35: 37 (July 1958). (2905)

The methods used by the British Rayon Research Association in investigating stop lines are described.

BETTER QUALITY FABRIC IN BULKED YARN KNITTING. Brit. Nylon Spinners Ltd. Man-Made Textiles 35: 44-45 (July 1958). (2906)

Stripiness in hosiery is not necessarily due to yarn characteristics but may be caused by the knitting differences between individual feeders. Machine design improvements and instruments for controlling yarn feed uniformity are discussed. Photographs.

FABRICS C 4

CHANGES IN THE PROPERTIES OF TEXTILES DUE TO ENVIRONMENTAL FACTORS. H. Sommer. Z. ges. Textil-Ind. 60, No. 1: 12-16; No. 3: 100-103 (1958). In German. Through BCIRA 38: 277 (1958). (2907)

In this review, the author discusses and shows graphically the effect of relative air humidity on water-vapor sorption and on the strength properties of fabrics, the temperature dependence of the strength properties, permanent property changes due to the action of heat, temperature and humidity dependence of other mechanical and technological properties, and effects of temperature and humidity during photochemical degradation of fibers. 36 references.

CAR UPHOLSTERY IN THE MODERN IDIOM. PART 3. LUXURY TRIMS IN NYLON. Man-Made Textiles 35: 39-41, 43 (July 1958). (2908)

FURNISHING FABRICS. Ciba Rev. 11: 2-33 (May 1958). (2909)

Furnishing fabrics in present-day interior decorating, by R. Beyer, p. 2-7; Furnishing fabrics of the Middle Ages and the Renaissance, by M. Braun-Ronsdorf, p. 8-16; French furnishing fabrics, by M. Braun-Ronsdorf, p. 17-25; Curtains and coverings for upholstered furniture, by M. Braun-Ronsdorf, p. 26-33.

PATTERN WHEEL DESIGNING. R. W. Mills. Hosiery Times 31: 57, 59 (June 1958). (2910)

The method of calculating a design for a 2-color float stitch fabric on a latch needle circular machine using pattern wheels is described. Diagrams.

CUTTING TERRY TOWELS FROM THE WOVEN LENGTH. T. Hargreaves. Textile Mfr. 84: 302-303 (June 1958). (2911)

The method of cutting towels by means of an electrically driven rotary cutting instrument is described.

TUFTING DEVELOPMENTS IN ENGLAND. Modern Textiles Mag. 39: 31-32 (July 1958). (2912)

Multicolor and patterning developments are discussed.

INDUSTRIAL AND SURGICAL WADDING PRODUCTION. Berliner Textilmaschinen GmbH. Textile Recorder 76: 78-79 (July 1958). (2913)

The range of equipment for the production of industrial and surgical waddings consists of a hopper feeder, a roller and clearer carding section, and cross laying apparatus, together with roll forming mechanism, and is designed for the production of wadding sheets for the felt industry, pads, industrial and tailors wadding, quilts, surgical cottons, filters, etc. Photographs. Diagrams.

ARNEL STAPLE IN WASH-AND-WEAR CLOTHS. H. F. Elsom and W. A. Schoeneberg (Celanese Corp.). Modern Textiles Mag. 39: 34-36, 38 (July 1958). (2914)

Construction details and dyeing and finishing procedures are given for Arnel/cotton, Arnel/rayon, and Arnel/Dacron/cotton fabrics. Tables.

FIBER TUBES PROVIDE LOW COST FABRIC STORAGE. G. J. Bevans. Modern Textiles Mag. 39: 39-40 (July 1958). (2915)

The system consists of a number of fiber storage tubes placed in rows as high as local fire codes allow. It is unnecessary to move a single bolt of fabric other than the one desired, and this slides easily from the tube. Photographs. Diagrams.

PERMANENCY OF WHITE IN SILK AND VISCOSE RAYON FABRICS. P. Rochas. Teintex 23, No. 1: 7-22 (1958). In French. Through BCIRA 38: 278 (1958). (2916)

Review of literature data on the permanency of white on silk, and viscose rayon, the yellowing caused by various finishes, and the effect of optical brightening agents.

PAPER COMPOSED OF MANMADE FIBERS. W. E. Hansen (E. I. du Pont de Nemours & Co.). Am. Textile Reptr. 72: 83-84 (July 17, 1958). (2917)

The unique properties of papers made of Dacron, nylon, and Orlon are noted, and their potential end uses enumerated.

CLOTHING AND TOLERANCE TO HEAT. J. H. Veghte and P. Webb. U.S. Air Force. Air Research & Development Command. Wright Air Development Center, Wright-Patterson Air Force Base, Dayton, O. Dec. 1957. 14 p. Order from Office of Technical Services, Washington 25, D.C. 50¢. PB 131 705. (2918)

A series of experiments was conducted to determine the effect of clothing on human tolerance to hot environments (90° to 160° F). Exposures were made in 5 different clothing assemblies which were representative of permeable and impermeable lightweight and heavily insulated AF clothing. The effect of the exposures was measured in terms of physiological strain. These experiments show to what extent impermeable clothing, as compared with permeable clothing, reduces human tolerance to heat, regardless of insulation value.

ELONGATION OF RAYON FABRICS IN DEPENDENCE OF TIME AND LOAD. E. Brodtmann. Z. ges. Textil-Ind. 60, No. 1: 25-31; No. 2: 72-75; No. 3: 104-106 (1958). In German. Through BCIRA 38: 278 (1958). (2919)

Three different yarns (viscose, cuprammonium, and acetate rayon) were woven into fabrics under identical conditions. Since tensile tests had first been carried out on the yarns, it was possible to compare the yarn and fabric strength. The tests were made on an extensiograph whose construction and mechanism are described. Steric phase diagrams of the tested rayon fabrics, and time-elongation curves are given and discussed.

WOVEN FABRIC STRUCTURE: SPOT DESIGNS WITH EXTRA WARP OR WEFT. D. C. Snowden. Man-Made Textiles 35: 36 (July 1958). (2920)

PLAIN WEAVE ORNAMENTATION BY USE OF A DARK AND A LIGHT COLOR IN WEFT AND WARP. P. Kreutz. Textil-Praxis (English ed.) No. 2: 63-65 (June 1958). (2921)

DESIGN IN WOVEN STRUCTURE. PART 65. COMBINING WARP AND WEFT PREDOMINANT WEAVES. D. C. Snowden. Wool Rev. 32: 39, 41 (June 1958). (2922)

RESEARCH PROGRAM FOR THE DEVELOPMENT OF A DESIGN PROCEDURE TO ENGINEER PARACHUTE FABRICS. W. G. Klein, C. A. Lermond, and M. M. Platt. Wright Air Development Center, Wright-Patterson Air Force Base, Ohio. May 1958. 56 p. WADC tech. report 58-65. (2923)

This report presents an analysis which attempts to define the mechanisms of air flow through parachute materials. The significant difference from prior work is that the fabric is treated as a three rather than two-dimensional structure, thus permitting a more accurate characterization of the actual flow region. Graphs. Diagrams. Microphotographs.

MANUFACTURE OF WOOL FELT AND THE MECHANICAL EQUIPMENT NEEDED. H. Dietrich. Textil-Praxis (English ed.) No. 2: 55-59 (June 1958). (2924)

The methods and machinery used in the conversion of loose batt or lap to felt are described. Photographs.

ELECTRICAL SYSTEMS FOR FIGURED TUFTING. Cobble Bros. Machy. Co. Man-Made Textiles 35: 62 (July 1958). (2925)

Electrical systems for pattern control are described.

EFFICIENCY AND ECONOMY OF FIBERS DURING THEIR TRANSFORMATION INTO FABRICS. J. V. Weinberger. Rayonne et Fibres Synthet. 13, No. 12: 1494-1502 (1957). In French. Through BCIRA 38: 135 (1958). (2926)

Comparison is made between the price, characteristics, and weight of fabrics from (1) continuous filaments, (2) multiple threads with a core in which the original twist was modified during processing, (3) long synthetic fibers, (4) cotton and wool spun by the traditional methods, and (5) carded wool. A table is given listing the characteristics of 40 different fabric types.

EFFECT OF VISCOSE STAPLE YARN STRUCTURE ON FABRIC PROPERTIES. K. V. Kumenova. Tekstil. Prom. 17, No. 12: 29-31 (1957). In Russian. Through BCIRA 38: 191 (1958). (2927)

The effect of twist coefficient of the yarn on the tensile strength, reversible deformation, creasability coefficient, drapeability, and shrinkage of the fabric after washing is examined. The results are tabulated and discussed.

FINISHING AND CHEMICAL PROCESSING D

TABLE OF TEXTILE ASSISTANTS. PART 1. St. Jost. Textil-Rundschau 13, No. 2: 89-99 (1958). In German. Through BCIRA 38: 272 (1958). (2928)

The third issue of this table contains textile assistants put on the market during 1956/1957, the data (trade name, producer, composition, use, and special characteristics) originating from publications in the American Dyestuff Reporter, Deutscher Färberkalender, and communications of producers. The present table lists textile assistants for preparation, bleaching, dyeing, and printing.

ALGINATES IN THE TEXTILE INDUSTRY. PART 1. SALTS AND DERIVATIVES OF ALGINIC ACID. H. Schulzen. Z. ges. Textil-Ind. 60, No. 6: 228-232 (1958). In German. Through BCIRA 38: 272 (1958). (2929)

Preparation of alginic acid and of sodium alginate, chemical constitution, and salts and derivatives of alginic acid are described, with brief reference to the properties of alginates.

CRIMPED NYLON HALF-HOSE: SUGGESTIONS FOR FINISHING. Brit. Nylon Spinners Ltd. Hosiery Times 31: 33, 36 (June 1958). (2930)

IMPROVING THE HAND OF FABRICS OF DACRON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. June 1958. 5 p. Bull. D-97 (replaces Bull. D-76). (2931)

A finishing process for filament fabrics using calendering, heat setting, and caustic treatment.

CHEMICAL PROCESSES D 1

LATEX IMPREGNATION FOR NONWOVEN FABRICS. L. Walter. Textile Bull. 84: 35-37 (June 1958). (2932)

Mechanical features of spray and squeeze latex impregnators, as well as their latex supply systems, are described. Diagrams.

HOW NAPPERS WORK. R. C. Franklin (David Gessner Co.). Textile World 108: 78-79, 82 (July 1958). (2933)

The important features of single-acting, double-acting, and knit goods nappers are described, and pointers on how to operate them most efficiently are given. Diagrams.

REALISTIC CONCEPT OF WASH-AND-WEAR. G. S. Wham (Good Housekeeping Inst.). Modern Textiles Mag. 39: 49-50 (July 1958). (2934)

The standards of wash-and-wear fabrics as defined by the Good Housekeeping Inst. are explained.

ELIMINATION OF STATIC ELECTRICITY FROM TEXTILES BY CHEMICAL FINISHING. E. I. Valko, G. C. Tesoro, and W. Ginilewicz (Onyx Oil & Chem. Co.). Am. Dyestuff Reptr. 47: P403-P409 (June 16, 1958). (2935)

The mechanism of protection against static accumulation is described in terms of chemical structure of finishes and processing aids. Electrical conductance of antistatic agents is related to their capacity to ionize and to attract water. The dependence of the electrical resistance of the finished textiles on the construction of the fabric and on the nature of the fiber is illustrated. An economical multipurpose finishing treatment based on the combination of antistatic protection with pigment padding is described. Graphs. 11 references.

ORGANOTIN COMPOUNDS AS TEXTILE PRESERVATIVES. H. J. Hueck and J. G. A. Luijten. J. Soc. Dyers Colourists 74: 476-480 (June 1958). (2936)

The suitability of a number of organotin compounds as preservatives for textiles has been investigated. The investigations comprise tests on the mothproofing and carpet beetleproofing of wool and on the rotproofing of jute and cotton. The tests have been combined with experiments on fastness to washing and with leaching experiments. Tables. 4 references.

FLAMEPROOFING OF TEXTILE FABRICS: FUNCTION OF ANTIMONY COMPOUNDS. E. G. Heighway-Bury (Associated Lead Mfrs. Ltd). Texture 5: 85-90 (June 1958). (2937)

The theories of flameproofing cellulose and the chemical behavior of the antimony compounds, in particular in the Antiflamm or TFRE process, are discussed.

COTTON SCOURING WITH REDUCED BOILING TIME. T. N. Afanas'eva, S. A. Vvedenskii, and A. S. Stepanov. Tekstil. Prom. 17, No. 9: 34-36 (1957). In Russian. Through BCIRA 38: 148 (1958). (2938)

Experiments have shown that the fabric can be boiled in alkali containing 10 g/l sodium silicate without increasing the active alkalinity of the solution as compared with the usual composition of scouring liquors. The high detergent power of sodium silicate makes it possible to reduce the time of boiling under pressure, according to the weight of the fabric, from 8 to 4 hr (for gray cotton cloth from 10 to 4 hr), preserving the qualitative characteristics of the bleached fabric (whiteness, capillarity, specific viscosity, strength). The reduced boiling time leads to increased boiler productivity, reduced steam and power consumption, and savings in sodium hydroxide.

STORK ROPE WASHER. Gebrüder Stork Apparatenfabriek NV. Man-Made Textiles 35: 61 (July 1958). (2939)

For the wet treatment of fabrics in rope form an automatic rope washer, called the Stork Rope-o-Matic, has been developed. The winches of the Rope-o-Matic change their direction of rotation periodically. Diagram.

WATERPROOFING IN THE FINISHING INDUSTRY. H. Hilscher. SVF Fachorgan Textilveredlung 13, No. 1: 27-31 (1958). In German. Through BCIRA 38: 274 (1958). (2940)

Reasons for using water repellent finishes and their potentialities are discussed, and the development of substances required for this purpose is briefly outlined. Sources of faults which adversely affect the quality of the desired effect are pointed out, and methods for testing the water repellent finish and its practical serviceability are reviewed.

CONTRIBUTIONS TO THE FLAMEPROOFING OF CELLULOSIC TEXTILES. PART 1. PHOSPHORIC ACID UREA PROCESS. R. Schiffner and G. Lange. Faserforsch. u. Textiltech. 8, No. 11: 435-443 (1957). In German. Through BCIRA 38: 153 (1958). (2941)

Cotton and spun rayon fabrics, as well as yarns, were treated with solutions of phosphoric acid and urea and, for comparison, with formaldehyde-containing solutions prepared from melts of these two components. After thorough rinsing with distilled or tap water, changes in tensile strength were determined. In each case, the strength losses were particularly high during testing in the wet state (as compared with the strength of the untreated fabric) and tended to increase with increasing concentration of the solutions. This tendency was smaller in the case of solutions of formaldehyde-containing phosphoric acid/urea melts but, for spun rayon fabrics, it was still too high to justify practical application of the method. Hot rinsing with hard water reduced the strength to a much lesser extent than distilled water. This was attributed to a type of bridge formation by divalent cations occurring during ion-exchange.

USE OF ACIDS IN BLEACHING. Dyer 119: 823-826 (June 6, 1958). (2942)

This article deals with the subject from several viewpoints with remarks on precautions to be observed. 4 references.

WATERPROOFING OF FABRICS. P. Rochas. Teintex 23, No. 1: 45 (1958). In French. Through BCIRA 38: 274 (1958). (2943)

The review published earlier (abstr. 863/58) is supplemented by additional information on the determination of the amount of water retained by samples after a 10 min exposure to the spray test on the Bundesmann apparatus. A 50% decrease in the water retention of waterproofed material as compared with the untreated fabric indicates a good quality treatment.

WASH-AND-WEAR PROBLEMS OF MERCHANDISING. P. J. Fynn. Modern Textiles Mag. 39: 55-56 (July 1958). (2944)

RESISTANCE TO CHLORINE DAMAGE IN HOME-TYPE LAUNDERING OF CEU-TREATED WASH-AND-WEAR COTTON FABRICS. R. M. Reinhardt, L. W. Mazzeno, Jr., T. W. Fenner, and J. D. Reid (So. Reg. Research Lab.). Am. Dyestuff Reptr. 47: 505-508 (July 28, 1958). (2945)

Cotton fabric treated with CEU (dimethylol cyclic ethyleneurea) resin was subjected to home-type laundering, particularly in the presence of chlorine bleach. The resin finish was applied with three types of catalysts and under various conditions of cure. Properties of the original resin-treated fabric--breaking strength, wrinkle-recovery angle, color, and nitrogen content--were essentially unchanged after 16 cycles of laundering with bleach and ironing. The excellent resistance of the CEU finish to chlorine bleaching with regard to discoloration is contrasted with results obtained with the two melamine-formaldehyde type finishes studied. Tables. Graphs. 11 references.

BEHAVIOR OF RESIN FINISHES DURING TREATMENT WITH CHLORINE-CONTAINING SOLUTIONS. R. Aenishänslin. SVF Fachorgan Textilveredlung 13, No. 1: 5-9 (1958). In German. Through BCIRA 38: 273 (1958). (2946)

The reaction mechanism of chlorine is described, with reference to the behavior of various resin types (carbamide, melamine, and imidazolidone resins). The effect of hardening, the role of catalysts, critical resin concentration, and utilization of the chlorine-binding properties of melamine in shrinkproofing of wool are discussed.

PROBLEMS OF THE WASH-AND-WEAR FINISH. F. Nestelberger. Textil-Rundschau 13, No. 1: 17-26 (1958). In German. Through BCIRA 38: 273 (1958). (2947)

The potentialities and limitations of wash-and-wear finishes are discussed, with reference to the present state of technology.

EVOLUTION IN FINISHING TECHNIQUES. PART 3. RAYON LININGS. F. Wood. Man-Made Textiles 35: 54-55 (July 1958). (2948)

The more recent types of dyeing and finishing machines, constructed to provide easily controlled minimum tension, dye-jigs, continuous open width desizing, scouring, soaping, and washing ranges, and tensionless drying ranges, as they apply to the finishing of filament rayon lining fabrics, are discussed. Diagram. Photograph.

WET CREASEPROOFING COTTON FABRICS. H. Fritzsch and F. Naumann. Deut. Textiltech. 7, No. 12: 666-669 (1957). In German. Through BCIRA 38: 185 (1958). (2949)

Wash-and-wear finishes and their advantages and disadvantages are reviewed and known testing methods, as well as the authors' own method, are described. Compositions found in the literature and suggested by the authors are enumerated and comparison is made between Melatex treated gray, mercerized, dyed, and finished cotton poplin and a spun rayon/cotton fabric (residual shrinkage, tensile strength, elongation in warp and weft direction, resin content, formaldehyde content, and creasability after air drying). Best results are obtained with Melatex at a concentration of 250 to 300 g/l and a pH value of 5.5. The resin content should be approximately 5%.

MODERN USE OF SILICONES. G. W. Madaras (Silicone Processes Ltd). Texture 5: 91-92 (June 1958). (2950)

The methods of applying silicones from organic solvent solutions and from aqueous emulsions by treatments requiring curing or polymerization at elevated temperatures and by treatments carried out at ordinary drying, or even at room temperature, are critically examined.

DEPOSITION OF POLYACRYLONITRILE IN WOOL. PART 3. PREPARATION AND PROPERTIES OF WOOL CONTAINING POLYACRYLONITRILE DEPOSITED WITH PERSULFATE INITIATOR SYSTEMS. B. K. Lohani, L. Valentine, and C. S. Whewell (Leeds Univ.). J. Textile Inst. 49: T265-T278 (June 1958). (2951)

A method was evolved, using persulfates as initiators, whereby polyacrylonitrile can be deposited in wool in a short time and in the presence of air. The milling shrinkage of fabrics was compared with that of equivalent fabrics prepared with the ferrous ion-hydrogen peroxide system. Graphs. Tables. 16 references.

RECENT PROGRESS IN WOOL RESEARCH. B. C. M. Dorset. Textile Mfr. 84: 308-312 (June 1958). (2952)

Recent work on the treatment of wool with resins to form chemically modified products and on carbonizing in the presence of a surface active agent to prevent lowering of strength and changes in dyeing properties is described.

FIBER AND FABRIC STRENGTH: EFFECT OF FINISHING TREATMENTS. Texture 5: 83-84 (June 1958). (2953)

It is pointed out, by means of examples, that it is necessary when introducing new finishes to ascertain the effects of the finish on the fabric as a whole in order to avoid adverse changes.

FINISHING OF WOOL FABRICS FOR CLOTHING. B. Hahn. Textil-Praxis (English ed.) No. 2: 78-82 (June 1958). (2954)

Following a summary of the general methods for finishing fabrics for wearing apparel, specific procedures for Donegal, Shetland, pepita, Kasha, rayés (50% wool/50% staple and shoddy), imitation ulster, rayon staple, and protein/Perlon blends are given.

USE OF HYCAR LATEX IN THE TEXTILE INDUSTRY. K. Waldmeier. Textil-Rundschau 12, No. 12: 700-702 (1957). In German. Through BCIRA 38: 268 (1958). (2955)

Description is given of the uses of Hycar latices: as a sizing agent for cotton warp yarn, in aftertreatment of cotton fabrics for improving abrasion resistance, as an addition to dye baths to obtain level dyeings on fabrics from synthetic fibers, as a sizing agent for rayon in combination with starch to improve seam strength, as an addition to urea or melamine formaldehyde resins to increase the crease resistance of cotton or rayon fabrics, and as a binding agent for nonwoven fabrics.

MANUFACTURE OF COATED FABRICS: PROCESSES USED AND THEIR BEARING ON THE CHOICE OF PIGMENTS. H. Shepherd. J. Soc. Dyers Colourists 74: 449-457 (June 1958). (2956)

Methods and processes used in the coating of fabrics with linseed oil, india-rubber, nitrocellulose, and vinyl resin compositions are described. The preparation of the base cloths and the compounding of the coating media are described, together with spreading and calendering techniques of application. Embossing and decorative finishing are outlined, and recommendations on the choice of coloring materials are given. Diagrams.

PHOTOCOLORIMETRY OF OPTICAL BLEACHING AGENTS. P. Rochas. Rev. Textile 56, Nos. 9-10: 584-589 (1957). In French. Through BCIRA 38: 271 (1958). (2957)

It is shown that optical bleaching agents are useful textile auxiliaries which, when used correctly, cause neither yellowing nor degradation of the fiber.

COLORIMETRIC PROPERTIES OF WHITE COTTON PIECE GOODS: A REPORT ON STUDIES CARRIED OUT BY THE AATCC SUBCOMMITTEE ON BLEACHING. E. S. Shanley. Am. Dyestuff Reptr. 47: P445-P449 (June 30, 1958). (2958)

Studies aimed at providing numerical specifications for the visual appearance of bleached cotton fabrics are reported. Three different spectrophotometers were in only fair agreement with each other. All failed to distinguish the smallest differences visible to the eye. However, spectrophotometry was quite effective in analyzing the nature of the color differences between samples. A photometer of lower cost and higher sensitivity is needed. Graphs. Tables.

RESIN FINISHING OF CELLULOSIC FABRICS. W. Rümens. SVF Fachorgan Textilveredlung 13, No. 1: 10-25 (1958). In German. Through BCIRA 38: 273 (1958). (2959)

The new reactant-type products (compounds having special reactivity towards hydroxyl groups of cellulose, forming cross-linkages) are a special class of aminoplasts which require for hardening or condensation acid donors or catalysts and heat. Some of these compounds (dimethyloldihydroxyethylene urea, tetramethylolacetylenediurea, dimethylol urea, dimethyloladipic acid diamide, and dimethylolbutanediol diurethane) were examined as to their behavior on cellulosic fabric by testing the creasing angle in warp and weft, tensile strength in warp and weft, abrasion resistance, loss on washing, residual shrinkage, and resin and nitrogen contents.

RECENT DEVELOPMENTS IN THE CHEMICAL FINISHING OF TEXTILES. F. Fortess (Celanese Corp. of America). Am. Dyestuff Reptr. 47: P513-P522 (July 28, 1958). (2960)

Following the introductory material, in which the wide variety of objectives in finishing are outlined, the author discusses the following topics: (1) aspects of "ease of care" finishing of cotton and rayon, (2) the chemistry of the silicone finishes and the resultant fabric properties, (3) special use of alkaline treatment for finishing hydrophobic fibers, and (4) new chemicals available for chemical finishing. Tables. Photomicrographs. Graphs. 21 references.

EFFECT OF pH IN BLEACHING. Textile Mfr. 84: 295-298 (June 1958). (2961)

The importance of pH in chlorine bleaching of cellulose, hypochlorite bleaching, the stability of hydrogen peroxide solutions, continuous peroxide bleaching, and peroxide bleaching of wool and silk is discussed. 9 references.

STOCKING SHAPING MACHINES: CABINET OR BELL? F. Fourné. Textil-Praxis 13, No. 1: 53-55 (1958). In German. Through BCIRA 38: 185 (1958). (2962)

The two machine constructions are compared to show that, as regards the quality of the stockings, preference is to be given to the bell-fixing machine.

CHLORINE RETENTION AND CHLORINE DAMAGE. A. C. Nuessle (Rohm & Haas Co.). Am. Dyestuff Reptr. 47: 465-469 (July 14, 1958). (2963)

Chlorine damage is due to chlorine retained in the fabric after bleaching; but the amount of damage is not always proportional to the quantity of chlorine retained. Temperature of ironing and buffering power of the resin are also involved. The interrelationship between these factors is a complex one, and can at present be expressed only qualitatively. Particular attention is given to the concept of buffering power. Tables. Graphs. 7 references.

FIXATION OF FINISHES WITH ANTARGAS POLYMERIZERS. C. Devienne. Industrie Textile: 61-64 (Jan. 1958). In French. Through BCIRA 38: 274 (1958). (2964)

Description is given of the polymerizing machines equipped with antargas infrared radiators, in which propane gas is used as fuel. Some production data are cited. The machines give satisfactory results with crease resistant, shrink resistant, waterproofing, etc. finishes, and can also be used in preforming of nylon, carbonization of wool fabrics, polymerization of impregnated papers, etc.

DYEING AND PRINTING D 2

FIBER STRUCTURE AND DYEABILITY. R. W. Moncrieff. Textile Mfr. 84: 282-283 (June 1958). (2965)

The influence of the three basic factors affecting fiber dyeability (ease of dye penetration, complexity of physical structure of the fiber, and the abundance of polar groups) on present and future dyeing processes is examined.

TECHNOLOGY OF DYEING. RECENT PROGRESS IN THE FIELD OF DYES. O. K. Dobozi. Industrie Textile: 825-828 (Nov. 1957); 51-59 (Jan. 1958). In French. Through BCIRA 38: 272 (1958). (2966)

Review. 218 references.

DETERMINATION OF DYE SOLUBILITY. M. Capponi. Textil-Rundschau 13, No. 1: 15-17 (1958). In German. Through BCIRA 38: 272 (1958). (2967)

The method described is based on the colorimetric determination of the redissolved filter residues, assuming that, during filtration of a given volume of a dye solution under accurately maintained constant filtering conditions, the absorbed or retained amount of liquid is constant. The solubility values are reproducible and reliable for the practical use of the dyes.

RELATIONSHIP OF DYE AND PIGMENT SALES TO TEXTILE PRODUCTION. J. Werner and R. Berger (Gen. Aniline & Film Corp.). Am. Dyestuff Reptr. 47: 442-443 (June 30, 1958). (2968)

DYEING ACRYLIC FIBERS AND BLENDS WITH CELLULOSIC FIBERS. H. Kellett. Textile Mfr. 84: 313-315 (June 1958). (2969)

Recommendations and precautions for dyeing Acrilan or Orlon with disperse, basic, acid, and chrome colors, and for producing varied effects on blends of these fibers with cellulose by reserving one of the fibers, or dyeing two-tone and solid shades, are given.

BEAM DYEING. W. C Dodson. Textile Bull. 84: 54-58 (June 1958). (2970)

The planning of beams, warping, dye beam handling, wetting out, dyeing, and drying are discussed in detail. Photographs.

APPLICATION OF AZO PIGMENTS TO NYLON. A. Butterworth. (Letter to the editor). J. Soc. Dyers Colourists 74: 480-481 (June 1958). (2971)

A method of making insoluble dyes temporarily soluble in water by the use of suitable solvents and alkali is described. After application to the fiber, removal of the solvent and alkali reconverts the dye to its water-insoluble form.

DYEING: THEORY AND PRACTICE. PART 2. W. Postman. Dyestuffs 42: 189-199 (June 1958). (2972)

A general survey of the dyeing process. 7 references.

DYEING OF COURTELLE FOR THE WOOLEN AND WORSTED TRADE. Courtaulds Ltd. Dyer 120: 25-29 (July 4, 1958). (2973)

Typical procedures and recipes are given for slubbing, yarn, and piece dyeing.

DYEING MARQUISETTES WITH MICROFIX COLORS. T. Weber. Ciba Rev. 11: 34-36 (May 1958). (2974)

Recommended procedures and dye types are summarized.

DYEING SPUN RAYON FABRIC WITH SULFUR DYES. G. I. Yakimov, N. A. Sokolova, and A. N. Vorobeva. Tekstil. Prom. 17, No. 10: 40-43 (1957). In Russian. Through BCIRA 38: 184 (1958). (2975)

Compared with cotton, spun rayon fabric exhibits a higher adsorption power for alkali hydroxides and, consequently, extracts from the dyebath all the free sodium hydroxide, sodium hydroxide formed as a result of sodium-sulfite hydrolysis, and that of the hydrolyzed alkaline dye compound. As a result of decreased alkali content in the dyebath, sodium hydrosulfide accumulates and, at the same time, changes take place in the degree of dye disperseability. These changes are expressed in a reduced fastness of the dyeings. This difficulty can be overcome by introducing into the dyebath excess of sodium hydroxide.

FORMATION OF PHTHALOCYANINE DYES ON COTTON FIBERS. B. Chi-min. Tekstil. Prom. 17, No. 12: 52-54 (1957). In Russian. Through BCIRA 38: 183 (1958). (2976)

The preparation, properties, and application of monoisoindolenines, polyisoindolenines, and condensed heavy metal isoindolenine complexes (dye intermediates of the phthalocyanine series), producing blue and green shades on cotton fiber, are described.

REACTIVE DYES FOR COLORING CELLULOSE FIBERS. J. A. Somers. Textile Recorder 76: 66-68 (July 1958). (2977)

The probable structure and mechanism of action of the Cibacron and Procion dyes are explained.

CIBACRON DYES ON WOOL. R. Casty. Ciba Rev. 11: 44-47 (May 1958). (2978)

A simple method of applying Cibacron dyes to wool is described. The essential features of the method are that dyeing is carried out at a pH of 4-5 in the presence of Neovadine AN or AL. Details are given. Tables.

NEW ITALIAN DYEING MACHINE. Spinner u. Weber 76, No. 2: 87 (1958). In German. Through BCIRA 38: 151 (1958). (2979)

Brief description is given of the mechanism of the apparatus developed by the Italian firm Ilma, Schio.

DYEING OF NYLON AND DACRON POLYESTER FIBER YARNS. G. T. Hug (E. I. du Pont de Nemours & Co.). Am. Dyestuff Reptr. 47: P452-P456 (June 30, 1958). (2980)

The author covers the relaxing step required prior to the winding of dye packages, the preparation and dyeing of muffs of stretch nylon, and the twist-setting of high-twist carpet yarns. He also presents general dyeing recommendations for nylon and Dacron.

PRESSURE DYEING OF YARNS. Jagri GmbH. Textile Recorder 76: 76 (July 1958). (2981)

In the Jagri machine, pressure is raised in the dye vessel by means of a weighting system. The machine also incorporates modifications developed with the object of economizing on liquor consumption, power consumption, and dyeing time. Photographs.

CONTROL DEVICE FOR DYEING NYLON STOCKINGS. F. Braun. Teintex 22, No. 11: 857-858 (1957). In French. Through BCIRA 38: 92 (1958). (2982)

The device described makes it possible to determine accurately the equilibrium between dye concentration in the bath and on the material being dyed. The control means consist of a photoelectric cell, a tristimulus filter, a diffusing glass, a light source, and a cell with transparent walls. On exhaustion of the bath, the cell causes the activation of a pump which introduces more dye into the bath, whereupon the operation proceeds automatically until equilibrium between the dye in the bath and the dye fixed is attained. Perfect levelness of the dyeings is claimed.

LABORATORY SCALE PAD-STEAM DYEING INSTALLATION. K. Döhl. SVF Fachorgan Textilveredlung 13, No. 2: 54-60 (1958). In German. Through BCIRA 38: 271 (1958). (2983)

The 1-m long continuous laboratory installation for the pad-steam dyeing method (Hoechst AG) has a roller width of 15 cm and requires per dyeing only 10-20 g of the material. The apparatus can be used for vat dyeing, as well as for dyeing with Anthrasol, Naphthol AS, and Hydron dyes. The construction and mechanism of the installation are described, with special reference to the pigment pad-steam method with intermediate drying and to the vat acid pad-steam method without intermediate drying.

BROWN-LONGCLOSE DOUBLE STICK HANK DYEING. Longclose Eng. Co. Ltd. Dyer 120: 59 (July 4, 1958). (2984)

The Brown-Longclose double stick hank dyeing system was developed specifically for hosiery and hand knitting yarns as well as for dyeing narrow fabrics. Features of the system are briefly noted. Photographs.

TRANSFER OF DISPERSE DYES TO CELLULOSE ACETATE DURING STEAMING. E. H. Daruwalla and V. R. Limaye. J. Soc. Dyers Colourists 74: 464-475 (June 1958). (2985)

The results of a study of the transfer of selected aminoanthraquinone and aminoazo disperse dyes to secondary cellulose acetate are presented. The effects of particle size and chemical structure of dye, presence of dispersing agents, and different thickener compositions were examined for appropriate conditions of application. With the majority of the dyes studied, a constant partition of dye between cellulose acetate phase and thickener phase at equilibrium is maintained, with increasing proportions of dye in the system until saturation of the cellulose acetate with the dye is reached. Study of binary mixtures of selected dyes indicates that the transfer characteristics of one component are unaffected by the presence of the other. The results are discussed with special reference to quantitative studies by other workers on the behavior of these dyes during dyeing. Tables. Graphs. Diagram. 28 references.

DYEING OF ZIPPER TAPES. E. Wilhelm. Textil-Praxis 13, No. 1: 70-71 (1958). In German. Through BCIRA 38: 183 (1958). (2986)

Since dyeing of zipper tapes in rope form presents great difficulties especially in vat dyeing (dye penetration and levelness), it is recommended that the tapes should be wound on perforated tubes and dyed, preferably, in a closed dyeing apparatus.

DYEING WOUND PACKAGES FROM REGENERATED CELLULOSE. E. Wilhelm. Textil-Praxis 12, No. 12: 1256-1259 (1957). In German. Through BCIRA 38: 121 (1958). (2987)

It is shown that rayon cheeses, produced on the Sahm precision cheese-winding machine and subjected to a hot pretreatment (presteaming or hot water treatment), can be dyed with difficult vat dye combinations. This new method may also facilitate dyeing of spun rayon cheeses.

CONTINUOUS PIECE DYEING WITH NAPHTHOL AS COMPOUNDS WITH REFERENCE TO THE PRODUCTION OF DISCHARGE GROUNDS FOR TEXTILE PRINTING. H. Keil. Textil-Praxis (English ed.) No. 2: 83-89 (June 1958). (2988)

See abstr. 1321/58.

CONTINUOUS INDANTHRENE DYEING PROCESS AND REDOX MEASUREMENT. G. Henze. Spinner u. Weber 75, No. 17: 903-904; No. 20: 1083-1086 (1957). In German. Through BCIRA 38: 92 (1958). (2989)

With reference to the Standfast, pad-steam, and wet-steam processes, the author discusses the redox measurement, its physical derivation, relationships between the EMK (electromotive force) and the rH value, and potentiometric measurement of the rH value. An example of rH measurement is given for two indanthrene dyes.

DYEING WOUND PACKAGES OF REGENERATED CELLULOSE. E. Wilhelm. Textil-Praxis (English ed.) No. 2: 89-94 (June 1958). (2990)

The effects of winding, presteaming or hot water treatment, and temperature are discussed. Photographs.

PAD-DYEING WITH COPRANTINE COLORS. H. Paltzer. Ciba Rev. 11: 36-38 (May 1958). (2991)

PAD-JIG DYEING WITH MICROFINED CIBANONE DYES. M. Peter and P. Ulrich. Ciba Rev. 11: 40-43 (May 1958). (2992)

OPTIMUM CONDITIONS FOR PRINTING SPUN RAYON FABRICS WITH DIAZOLE BLUE O. F. I. Sadov and N. N. Voznesenskii. Tekstil. Prom. 17, No. 12: 31-34 (1957). In Russian. Through BCIRA 38: 184 (1958). (2993)

Laboratory experiments, carried out on bleached cotton fabric and on pancreatine desized spun rayon serge (treated with sulfuric acid at 20° C) by printing them with three different compositions containing Diazole Blue O, are described. Experiments carried out on an industrial scale confirmed the main conclusions of the laboratory investigations and showed that it is possible to obtain fast prints with Diazole Blue O on fabrics from viscose staple fiber.

AUTOMATIC SCREEN PRINTING. Gebr. Stork & Co. Apparatenfabriek NV. Textile Recorder 76: 79, 81 (July 1958). (2994)

Features and operation of the Stork automatic screen printing machine are described in detail. Photographs.

MECHANICAL PROCESSES D 3

ELECTROSTATIC OPEN-WIDTH FAZ FLOCKING INSTALLATION. W. Swatek. Reyon, Zellwolle u. Chemiefasern No. 10: 717-720; No. 11: 785-787 (1957). In German. Through BCIRA 38: 93 (1958). (2995)

The flock-printing principles are discussed in general and the characteristics of the FAZ machine (Vollenweider & Saladin AG) are discussed in detail, with reference to its individual components and their mechanisms. Some directions are also given which are essential for faultless operation of the open-width flocking installation.

CRITICAL ANALYSIS OF SATURATED STEAM SETTING. F. Fourné. Reyon, Zellwolle u. Chemiefasern No. 12: 863-865 (1957). In German. Through BCIRA 38: 153 (1958). (2996)

On the basis of experimental results it is recommended that the beam with the woven or knitted fabric, or the yarn bobbins, should be introduced from a uniformly conditioned room into the steamer, that the steamer should be closed while producing a vacuum, and that saturated steam should then be fed at the desired temperature. The process is then continued in the usual manner. The saturated steam, acting on the fabric conditioned evenly on the outside and inside, causes uniform temperature and swelling effects, preventing the occurrence of dyeing differences.

PRINCIPLES OF SETTING NYLON MATERIALS AND SOME RECOMMENDED METHODS. Brit. Nylon Spinners Ltd. Hosiery Times 31: 29-30, 33 (June 1958). (2997)

Following a discussion of the general principles and mechanism of setting, the three principal methods (high temperature dry heat, pressure steam, and wet setting) are described.

LARGE LENGTHS ON THE FOLDING MACHINE. L. Cordet. Industrie Textile: 740-742 (Oct. 1957). In French. Through BCIRA 38: 154 (1958). (2998)

The machine described (developed and patented by Etab. Gillet-Thaon) is constructed so as to ensure automatically, with improved productivity, the folding of large quantities of fabric into pleats of the same length. The folded piece, of the desired length, is ejected without stopping the machine by lowering the table. Both ejection of the piece and lowering of the table are effected automatically by a group of drives which becomes disengaged by a fold feeler.

VOLLENWEIDER PEERLESS WOOL SHEARING MACHINE. Textil-Praxis (English ed.) No. 2: 75 (June 1958). (2999)

Outstanding features of this double-bladed machine are: guaranteed proper shearing as a result of especially designed bearings for the dynamically balanced spiral cylinders, extremely robust shearing tables, and stable box-type uprights. Photograph.

RAISING THROUGHOUT THE AGES. R. Steidl. Spinner u. Weber 76, No. 3: 136-137; No. 4: 181-183 (1958). In German. Through BCIRA 38: 274 (1958). (3000)

GILL BOX STOP MOTIONS. Texture 5: 122-123 (June 1958). (3001)

The operation and features of mechanical stop motions, electrical sliver stop motions, and electrical predetermined length counters for stopping the machine are briefly reviewed.

CALENDERS IN TEXTILE FINISHING. W. Gardel and E. Schneebeli. Spinner u. Weber 75, No. 23: 1270-1272 (1957). In German (English translation). Through BCIRA 38: 121 (1958). (3002)

Various types of calenders are described, including: calenders for removing excess liquid (wet calenders), roller calenders for imparting luster or a matt-finish, dry calenders, universal calenders, the automatic revolving mangle, embossing calenders, the Norton calender, and the jute calender.

FRICTION CLOTH ROLLER, FAZIS SYSTEM. Melliand Textilber. 38, No. 11: 1288-1290 (1957). In German. Through BCIRA 38: 58 (1958). (3003)

The new FAZIS cloth rolling device, described and illustrated, is suitable for use in wet and dry finishing and can be attached to all machines. It ensures constant tension during winding of the cloth beam and may also act as brake at the machine inlet. Other advantages are enumerated.

CALENDERING OF A VISCOELASTIC MATERIAL. P. R. Paslay. J. Appl. Mechanics 24: 602-608 (Dec. 1957). (3004)

The solution of the calendering problem for viscous materials is extended to include the first effects of elasticity. A numerical procedure for the solution of the approximate equations is contained in the appendix. Graphs. 8 references.

DRYING D 4

CAN INFRARED RADIATION BE UTILIZED TO A GREATER EXTENT FOR DRYING TEXTILES? R. Carmel. Industrie Textile: 903-905 (Dec. 1957). In French. Through BCIRA 38: 154 (1958). (3005)

The advantages of infrared heating are enumerated, various types of emitters are reviewed and the main factors to be considered in drying textile material are discussed, with reference to the lamps used and their arrangement in the drying installation.

COMBINED SHRINKING AND DRYING APPARATUS FOR LOOPED MATERIAL. Textil-Praxis (English ed.) No. 2: 76 (June 1958). (3006)

Features of the Kiefer perforated drum dryer are described. Diagram.

GIANT DRYER FOR TUFTEDS. Brit. Tufting Machy. Ltd. Dyer 119: 421-423 (Mar. 14, 1958). (3007)

This new dryer is 100 ft long, 19 ft wide, and 17 ft in height and has been designed for printed tufted carpets. A diagram showing the material flow in a complete range in which there is no drying unit between the printing machine and fixation storage zone (e.g. for use with fabric printed with Procion dyes) is included. Photographs.

TESTING AND MEASUREMENT E

REPORT ON THE MEASUREMENT OF THE IRREGULARITY OF SLIVERS, ROVINGS, AND YARNS. Textile Inst. J. Textile Inst. 49: P267-P273 (June 1958). (3008)

This report includes (1) a definition of an absolute measure of irregularity as an ideal to which practical measures may be referred; (2) conditions for reproducibility within and between regularity testers; and (3) specification of those conditions which can at present be standardized. 8 references.

DEVICE FOR MOISTURE DETERMINATION. E. Hummel. Textil-Praxis 12, No. 11: 1108-1111 (1957). In German. Through BCIRA 38: 99 (1958). (3009)

The precision balance ASE No. 719 (A. Sauter KG) is a simple moisture-measuring device suitable for weight determinations of textile samples using infrared drying. The infrared radiator acts directly on to the scale pan with the sample and is adjustable in height. The device is cheap, of simple construction, easy to manipulate and easily transportable. The results are not affected by brightening agents and fiber preparations; they are slightly lower than those from oven drying.

THEORY OF EXTREMAL VALUES APPLIED IN TESTS. M. L. Godfrey. Ind. Labs. 9: 74-79 (Aug. 1958). (3010)

The use of statistical theory of extreme values, as applied to life testing, is explained. Illustrations are from zipper testing.

FIBERS E 1

QUANTITATIVE DETERMINATION OF SYNTHETIC FIBER PROPORTIONS IN BLENDED FABRICS AND YARNS. J. Ullrich. Deut. Textiltech. 7, No. 10: 578-579 (1957). In German. Through BCIRA 38: 63 (1958). (3011)

Directions are given for the preparation of the samples and calculation of the analytical results, and methods for the separation of mixtures of polyvinyl chloride, polyamide, polyacrylonitrile or polyester fibers with viscose, cotton and wool, respectively, are described with reference to literature data.

FINENESS MEASUREMENT OF COTTON FIBERS BY PERMEABILITY METHODS. T. Fransen. Ann. Sci. Textiles Belges No. 3: 55-89 (Sept. 1957). In French. Through BCIRA 38: 100 (1958). (3012)

After a brief description of the morphological characteristics of cotton fibers and the relationship between maturity, gravimetric fineness, and specific surface, the author discusses the law of flow through a porous mass, the history and principles of permeameters (Arealometer, micronaire, Anderson airflow meter, Portar, Speedar) and their mechanisms, precautions to be taken during permeability measurements (preparation of the plug, volume of the fibers), standardization of permeameters, advantages of permeability tests, and relationships between the micronaire index and cultivation conditions, spinning properties, dyeability, and finishing properties of cotton fibers. 31 references.

OPTICAL MEASUREMENT OF THE TRASH CONTENT OF GINNED COTTON. C. Baker, G. Kirk, and H. Gaffney (U. S. Testing Co.). Textile Research J. 28: 510-516 (June 1958). (3013)

The authors discuss a new optical-electronic method of scanning a classer's sample to record both particle size and number of particles. The sum of the areas in the sample which are darker than the background is taken as a percent of the total area scanned. The method utilizes a closed circuit television camera, which in a fraction of a second traverses the face of a sample and reads out the desired information directly. Results of tests designed to prove the reliability and validity of the method are shown, and a comparison to current methods of evaluation is given. Diagrams of the optical and computing systems used in the method are explained in detail. Photographs. Diagrams. Tables. 6 references.

RED-GREEN TEST. H.-P. Maier. Textil-Praxis 12, No. 11: 1075-1076 (1957). In German. Through BCIRA 38: 100 (1958). (3014)

The red-green test gives, owing to the difference in substantivity, different dyeings on mature and immature cotton fibers. The relationship between physical, physicochemical, chemical and botanical factors and substantivity are examined, with reference to dye diffusion into the micellar spaces, reversibility of a dyeing process, hydrogen-bond formation, dyes and dye structure, and general physiology and morphology. Triphenylmethane dyes were found to dye cotton uniformly, regardless of its degree of maturity.

RED-GREEN TEST EVALUATION. F. W. Fleischle. Textil-Praxis 12, No. 11: 1087-1088 (1957). In German. Through BCIRA 38: 100 (1958). (3015)

The points to be taken into account when using the red-green test for determining the degree of cotton maturity are (1) accurate agreement between the ratio and absolute amount of the red and green dye, and (2) maintenance of constant time of rinsing and rinsing temperature. The degree of maturity can be derived from the red-green test either by weighing or by determining the frequency of the degree of maturity. Both methods are described and limitations of the test are pointed out.

MATURITY MEASUREMENT OF RAW COTTON FIBERS BY TREBLE DIFFERENTIAL DYEING. L. J. Rony. Bull. Inst. Textile France No. 68: 31-52 (June 1957). In French. Through BCIRA 38: 61 (1958). (3016)

The author examines the relationship between dye affinity and standard maturity for cotton samples with staple lengths of 18-34 mm and an average ribbon width of 19 μ (the latter was measured by allowing the mature fibers to swell in 18% caustic soda). It is shown that the method of treble differential dyeing is applicable to cottons with various ribbon widths and various staple lengths.

USE OF DIAL GAUGES IN CALCULATING THE RESULTS OF FIBROGRAPH LENGTH TESTS. J. T. Rouse (U. S. Dept. Agri.). Textile Research J. 28: 505-510 (June 1958). (3017)

In a comparison of the array and the regular and dial Fibrograph methods of measuring cotton fiber length, the dial method was found to have a number of advantages.

MICRONAIRE READING AS A CLOSE APPROXIMATION TO FIBER THICKNESS. K. L. Hertel (Univ. of Tenn.). (Letter to the editor). Textile Research J. 28: 442-444 (May 1958). (3018)

The proposed scientific scale values for equivalent fiber thickness (which is derived by dividing the perimeter of the fiber into twice the cross-sectional area) is shown to be almost indistinguishable from the micronaire reading of wide practical usage. The adoption of the proposed scale would thus give clarity and scientific standing to an otherwise practical but unclarified measurement.

PNEUMATIC METHOD OF MEASURING COTTON FIBER STAPLE LENGTH. H. M. Brown. Textile Research J. 28: 516-520 (June 1958). (3019)

A pneumatic device for measuring the mean and upper-half mean fiber lengths is described. Air is drawn through a cotton fiber beard (formed with two combs) placed over a narrow slit to form the fourth arm of a pneumatic Wheatstone bridge. It is shown that the unbalanced deflection of the "pneumatic galvanometer" across the bridge varies correctly with the number of fibers over it to enable measurement of the mean value from curves automatically drawn by the device. For 17 cottons data are presented which compare the results of this method with those obtained with the Fibrograph. Diagram. Graphs. Table. 3 references.

IDEAL MICRONAIRE VALUE. G. Raes and T. Fransen. Textil-Praxis 12, No. 12: 1194-1197 (1957). In German. Through BCIRA 38: 127 (1958). (3020)

The micronaire value characterizes the variations between batches and between bales of one batch, gives indications regarding the spinnability of cottons, is in direct relationship with the nep formation, and shows the behavior of cotton in the yarn as well as the dyeing properties of the fibers. Since there is no ideal micronaire value for all cottons and their end-uses, an attempt is made to determine the permissible limits of the micronaire value which could be used in controlling the cotton quality before processing.

ELECTRONIC APPARATUS FOR DETERMINING COTTON MATURITY. Spinner u. Weber 75, No. 18: 944-945 (1957). In German. Through BCIRA 38: 126 (1958). (3021)

Technical data and description are given of an apparatus (produced by Metrimpex, Budapest) which makes it possible to determine rapidly the mean degree of maturity of a fiber bundle by means of the polarization effect. The light intensity, which depends upon the magnitude of the double refraction of the cotton fibers arranged between crossed polarization filters, is measured by means of a photocell and recorded.

DIFFERENTIATION BETWEEN MOHAIR AND WOOL BY MEASURING THE DISTANCES BETWEEN SCALES. H. Klenk. Textil-Praxis 12, No. 11: 1071-1074 (1957). In German. Through BCIRA 38: 102 (1958). (3022)

The method recommended (developed by J. H. Skinkle, Am. Dyestuff Reptr. 26: 620 (1936)) is based on measuring the scale length of the fibers. Preparation of the fiber samples (cover-glass impression and plate method) and their examination are described in detail and limitations of the method are pointed out.

DETERMINATION OF COTTON FIBER FINENESS BY THE AIR FLOW METHOD. Textile Inst. J. Textile Inst. 49: P249-P254 (June 1958). (3023)

Tentative textile standard no. 50.

SWELLING OF CUT ENDS: METHOD FOR QUALITATIVE EVALUATION OF FIBER STRUCTURE. K. Schwertassek. Faserforsch. u. Textiltech. 8, No. 11: 448-457 (1957). In German. Through BCIRA 38: 157 (1958). (3024)

The swelling phenomena at the cut ends of cotton, viscose, polyamide, polyester, polyacrylonitrile, polyvinyl chloride, cellulose acetate, triacetate, casein, silk, and wool fibers (in sulfuric acid) are reviewed and tabulated. The table showing the behavior of these fibers includes data on the spinning process, the presence of skin, cut-end swelling characteristics, and crystal structure of the fibers.

IDENTIFICATION OF TEXTILE MATERIALS. 4th ed. Textile Inst.. 10 Blackfriars Street, Manchester 3, England. 1958. 148 p. $3.85. (3025)

A section on the properties of natural and manmade fibers (extensively rewritten and considerably enlarged from the third edition) is followed by a scheme of analysis, notes on reagents and methods of test, and 123 photomicrographs (some in color).

INFRARED SPECTROSCOPY FOR THE IDENTIFICATION OF COMMERCIAL POLYAMIDE FIBERS. P. Bouriot. Bull. Inst. Textile France No. 68: 7-13 (June 1957). In French. Through BCIRA 38: 62 (1958). (3026)

Nylon 66, 6 (Perlon), and 11 (Rilsan) can be distinguished from each other by examining the infrared spectra, in the range of 2-15μ, of thin films of these polyamides obtained from formic acid solutions.

STRENGTH OF GLASS FIBERS. N. J. Parratt (Tube Investments Research Labs.). Nature 181: 1726-1727 (June 21, 1958). (3027)

Variations in results in tensile testing are discussed.

YARNS E 2

METHODS AND DEVICES FOR DETERMINING POINTS ON THE VARIANCE-LENGTH CURVE CB(L). W. Wegener and H. Peuker. Textil-Praxis 12, No. 12: 1183-1191 (1957). In German. Through BCIRA 38: 128 (1958). (3028)

The authors review the methods and devices available for experimental examination of a fiber system, whose irregularity is characterized by variations in mass, volume twist, strength, elongation, hairiness, and impurities (husks, neps). Special attention is paid to direct and indirect scanning of the fiber system, capacitive measurement of fiber-mass variations, the mechanisms of measuring condensers (Textronograph) and transformers, the derivation of the CB(L) curve from the recorded diagrams, the principles of electrical integration (summation), the integration process with and without additional damping circuit, and the Uster regularity value obtained on the Uster integrator. 70 references.

EXPERIMENTS ON MEASURING AND TESTING THE BREAKING LOAD IN PRACTICE. J. Juilfs. Melliand Textilber. 38, No. 8: 863-867 (1957). In German. Through BCIRA 38: 62 (1958). (3029)

Experiments showed that, under identical conditions, breaking load values differ for the same material in dependence of the testing device used for the determination. Apart from the effects of humidity and temperature, the factors affecting the values comprise: (1) the time-dependent increase of the force during the test, (2) the effects of inertia and friction of the force-measuring system, (3) the structurally different stress at the beginning of the tensile test, and (4) special factors due to the interaction of apparatus and sample. The individual parameters are discussed.

SCHUMACHER HARP TEAR TESTER WITH INERTIA-FREE OPERATING DIAGRAM WRITER. N. Reinfeld. Textil-Praxis 12, No. 10: 963-964 (1957). In German. Through BCIRA 38: 31 (1958). (3030)

It is shown that the harp dynamometer in its present construction, provided with the inertia-free operating diagram recorder, can be used for rapid evaluation of yarn quality and, consequently, for continuous quality control in the spinning plant.

CB(L) LENGTH VARIATION. W. Wegener and H. Peuker. Textil-Praxis 12, No. 10: 980-992 (1957). In German. Through BCIRA 38: 30 (1958). (3031)

Problems of the variance-length curve (yarn irregularity, length variations, variation coefficient, ranges of the variance-length curve, relationship between fiber mass and twist, the real and the ideal total variation coefficient, mean fiber fineness and its variations, extended expression for the length variation, length and cross-sectional deviations) are reviewed. 44 references.

GETTING A UNIFORM FINISHER LAP. T. A. Subramanian and S. M. Patel. Textile Dig. 19: 7-18 (Jan.-Mar. 1958). (3032)

Means of improving picker lap quality, as measured on a yard-to-yard weight variations basis.

FABRICS E 3

INSPECTION OF FABRICS LEAVING THE LOOM, SIMPLIFIED BY MODERN INSTRUMENTATION. Bull. Inst. Textile France No. 69: 95-100 (Aug. 1957). In French. Through BCIRA 38: 118 (1958). (3033)

New automatic cloth inspection and marking devices are reviewed.

METHOD OF TESTING WATER REPELLENCY OF FABRICS PERMEABLE TO AIR USING A BUNDESMANN TYPE APPARATUS: FOURTH REPORT ON INTERLABORATORY TRIALS. Textile Inst. J. Textile Inst. 49: P255-P266 (June 1958). (3034)

Bundesmann tests have been carried out on 10 machines to investigate the effect of various factors considered likely to affect the absorption and penetration criteria. The factors included machine variations, nature of the wiper surface, method of removing surplus water, drop weight, temperature, and pH of the water. Tables. 4 references.

WASH-WEAR RESINS FOR WHITE COTTON FABRICS. H. C. Borghetty. Am. Dyestuff Reptr. 47: P509-P512, P523 (July 28, 1958). (3035)

The author interrelates the testing of crease-resistant cotton fabrics with their actual performance under severe laundry conditions. He traces the development of the new chlorine-resistant resins that have had such recent spectacular success in the white shirting field and discusses the difficult conditions encountered in their application. Tables. Graphs. 9 references.

TESTING AND EVALUATION OF WASH-AND-WEAR PROPERTIES. G. B. Krumholz, Jr. (U. S. Testing Co.). Modern Textiles Mag. 39: 51-54 (July 1958). (3036)

The washing procedures, psychometric methods, and physical standards used by the U. S. Testing Co. in evaluating wash-and-wear characteristics are described.

THE PRACTICAL DETERMINATION OF STRENGTH OF AIRCRAFT FABRIC WITH DOPE REMOVED. A. L. Morse. Civil Aeronautics Administration, Indianapolis, Ind. Jan. 1958. 10 p. Order from Office of Technical Services, Washington 25, D. C. 50¢. PB 131 639. (3037)

A portable impact-type fabric tester was developed for use against doped aircraft fabric as an inspection aid to indicate whether or not the tensile strength of that fabric is above a predetermined value. Tests were conducted to calibrate the blow energy delivered by the tester vs tester adjustment and to determine the relationship between tester blow energy for penetration of doped fabric and the tensile strength of that fabric with the dope removed. Photographs. Graphs. Diagrams.

PILLING TENDENCY TESTING. German Research Inst. for the Textile Ind. Melliand Textilber. 38, No. 11: 1244-1248; No. 12: 1358-1360 (1957). In German. Through BCIRA 38: 64 (1958). (3038)

Report on experiments carried out in the laboratories of 10 firms and institutes to compare the existing methods for testing the pilling tendency of woven and knitted textile materials with each other and with the results obtained under practical conditions. Since none of the methods gave completely satisfactory results, a generally applicable test was developed which, in a comparative investigation, gave for all materials tested a satisfactory agreement between the results of different laboratories and those from practical wear tests. The new method is described.

OTHER E 4

MEASUREMENT OF INTRINSIC VISCOSITY OF CELLULOSE IN CUPRIETHYLENEDIAMINE AND OF THE VISCOMETRIC MEAN DEGREE OF POLYMERIZATION (DP). J. Cyrot. Bull. Inst. Textile France No. 68: 55-66 (June 1957). In French. Through BCIRA 38: 60 (1958). (3039)

Directions are given for the preparation of cuprietheylenediamine solutions and the duration of dissolution of viscose rayon and rayon staple, and the apparatus, effect of temperature, a rapid method for measuring DP, a simple method of calculating DP, and measurement of DPs higher than 1,500, are described. Results obtained with different methods and different solvents are compared.

ANALYSIS OF AMINO-FORMALDEHYDE RESINS. J. C. Morath and J. T. Woods (Am. Cyanamid Co.). Anal. Chem. 30: 1437-1440 (Aug. 1958). (3040)

Methods for analysis of textile resins of the amino-formaldehyde type are reviewed and summarized and, in some instances, are given in detail. Methods are included for the amino portion of the resin and the various forms of formaldehyde and/or methanol. The chromotropic acid method for total formaldehyde is of particular interest because of its speed and simplicity. Tables. 17 references.

REPRODUCIBILITY OF DEGREE OF POLYMERIZATION (DP) AND SWELLING MEASUREMENTS, IN CUPRIETHYLENEDIAMINE, OF VISCOSE STAPLE FIBERS. J. P. Fleury and M. T. Reitzer. Bull. Inst. Textile France No. 68: 15-30 (June 1957). In French. Through BCIRA 38: 61 (1958). (3041)

Factors affecting the results are examined and it is shown that the variations in DP and swelling are due mainly to variations in viscosity values. Statistical interpretation of the results, especially as regards determination of the homogeneity of a batch of rayon staple makes it possible to ascertain whether the differences between various bales of one batch are due to the errors associated with the method or to variations in the properties of the material.

COMPARATIVE TESTS OF INDIVIDUAL LIGHTFASTNESS METERS. L. F. C. Friele and H. J. Selling. Vezelinstituut T.N.O. Mededeling No. 115: 1-29 (Apr. 1957). In Dutch. Melliand Textilber. 38, No. 11: 1269-1273 (1957). In German. (3042)

Comparative lightfastness tests were carried out for a variety of dyestuffs and substrates. For the exposures, natural daylight and some exposure cabinets (Fugitometer, C.P.A. Fading Lamp, Fadeometer, Xenotest) were used under varying conditions. The carbonarc lamps failed for some synthetics. The Xenotest gave results in accordance with daylight. For lightfastness tests, an effective humidity of 30% is recommended; the black-bulb-temperature should not exceed 50° C. Tables. 7 references.

MOISTURE DETERMINATION IN TEXTILES BY ELECTRICAL MEANS. D. Kaufmann. Melliand Textilber. 38, No. 8: 937-939; No. 10: 1177-1180 (1957). In German. Through BCIRA 38: 59 (1958). (3043)

Various systems of electrical moisture measurement in textiles are reviewed, with special reference to the resistance method and the factors affecting the results. Directions are also given for controlling these factors and reducing their effect to a minimum.

INDUSTRIAL ENGINEERING F

COST SYSTEM OUTLINES NO. 1. COTTON TEXTILES. International Cooperation Administration. Washington. 1957. 202 p. Through BCIRA 37: 657 (1957). (3044)

This book "has been prepared especially for plant accountants working in newly established cotton spinning countries or in mills having no suitable costing procedures." It is divided into four main parts covering: spinning, weaving, knitting, and finishing (including bleaching, mercerizing, dyeing, and printing).

EFFICIENCY OF N MACHINES UNIDIRECTIONALLY PATROLLED BY ONE OPERATIVE WHEN WALKING TIME AND REPAIR TIMES ARE CONSTANTS. C. Mack, T. Murphy, and N. L. Webb. J. Royal Statistical Soc. B 19, No. 1: 166-172 (1957). (3045)

The solution is given to the problem of determining the efficiency of N machines looked after by an operative who walks round them in one direction, always taking the same time to walk to a given machine from the previous one and to inspect it and service it (this overall time is called the walking time), and then, if the machine has stopped, taking a fixed time to repair it. 6 references.

EFFICIENCY OF N MACHINES UNIDIRECTIONALLY PATROLLED BY ONE OPERATIVE WHEN WALKING TIME IS CONSTANT AND REPAIR TIMES ARE VARIABLE. C. Mack. J. Royal Statistical Soc. B 19, No. 1: 172-178 (1957). (3046)

The solution is given to the problem of determining the efficiency of N machines looked after by an operative who walks round them in one direction taking a constant time to walk from one machine to the next, inspect and service it (this overall time is called the walking time), and then, if the machine has stopped, repairing it, when the repair times have a probability distribution of a very general nature. 3 references.

HOW TO MEASURE AND COMPARE MILL PERFORMANCE. W. M. Patton, Jr. (Shuford Mills). Textile World 108: 49-53, 128 (July 1958). (3047)

This article describes a technique Shuford Mills worked out for measuring such factors as raw-material cost, labor cost, waste, quality, and personnel effectiveness in each of its 11 mills and comparing one mill with another.

COSTING IN THE TEXTILE BLEACHING, DYEING, AND PRINTING TRADE. Textile Finishing Trades Assoc. Sir Isaac Pitman & Sons, Ltd, London, England. 1957. 67 p. 21s ($2.95). (3048)

Principles of costing are set out to help establish a uniform system of costing in the British bleaching, dyeing, and printing industries.

NEW USES OF THE ABSTRACT. G. A. W. Boehm. Fortune 58: 124-127, 156-160 (July 1958). (3049)

Application of abstract mathematical theory to the solution of economic problems in industrial research, production, marketing, and distribution, including outstanding examples of the successful use of mathematics and other examples of unsolved problems.

THEORY OF MACHINE INTERFERENCE: LOSSES ON HOPPER-FED MACHINERY. C. J. Anson. Time & Motion Study 6: 30-41 (Aug. 1957). (3050)

A general approach for applying published tables to determine machine interference loss is presented. On some hopper-fed machines a major portion of the work can be done while the machines are running. The treatment of such work is a weak point of the existing theory of interference loss and a new theory has been developed for hopper-fed machinery. The interference loss derived from the theory has been checked against that experienced during experimental staffing studies and there is fair agreement between theory and practice. Tables. 17 references.

OPTIMUM NUMBER OF NONAUTOMATIC LOOMS PER WEAVER. A. A. Niazi. Textile Dig. 19: 31-37 (Jan.-Mar. 1958). (3051)

Use of queuing theory applications for loom assignments.

MACHINERY AND MAINTENANCE F 1

IDEAL ELECTRICAL LAYOUT FOR A TEXTILE MILL. M. V. Gelders. Can. Textile J. 75: 71-74 (June 27, 1958). (3052)

A basic physical layout for a hypothetical textile mill served by a power company is outlined. Such factors as reduction of lightning hazards, power conveyors, unit substations, conductor sizes, loom switches, and lighting are discussed in detail.

DUST CONTROL METHODS FOR PLANT AND PRODUCTS. PART 2. F. H. Slade. Textile Mfr. 84: 275-280 (June 1958). (3053)

Duct systems and their air velocity requirements are discussed, and various air cleaning methods (e.g. gravitational, filtration, sprays, centrifugal devices, electrostatic precipitator, and vacuum systems) are described. Table. Photographs.

USE OF POWER ELEMENTS IN TEXTILE PLANTS. L. Walter. Textile Mfr. 84: 245-247 (May 1958). (3054)

Older machines can often be modernized by replacing hand-operated mechanisms actuated by manual levers, etc., with power actuated machine elements. Applications of electrical, pneumatic, hydraulic, or electro-hydraulic power elements for reconstructing textile machines and for modernizing the textile plant are described. Diagrams. Photograph. 8 references.

WASTE DISPOSAL F 2

POLLUTION CONTROL OF NEW ENGLAND INTERSTATE WATERS. J. C. Knox. Am. Dyestuff Reptr. 47: P477-P479, P491 (July 14, 1958). (3055)

The work of the New England Interstate Water Pollution Control Commission is reviewed. Tables. 4 references.

DISPOSAL OF COMBINED TEXTILE FINISHING WASTES AND DOMESTIC SEWAGE. G. G. Bogren. Am. Dyestuff Reptr. 47: P473-P476 (July 14, 1958). (3056)

Five years' experience at Sayles Finishing Plants indicates that cotton-finishing wastes having a pH in excess of 10.5 may be treated on trickling filters with a small admixture of domestic sewage, with BOD reductions averaging 50% to 60%. Neutralization of wastes will enable the same trickling filters to reduce BOD 60% to 80%. Mixtures of cotton finishing wastes with a small percentage of domestic sewage show a very slow BOD in one day, compared with domestic sewage. Graphs. Tables. 3 references.

COMBINED TREATMENT: BLEACHERY WASTE AND DOMESTIC SEWAGE. J. L. Brown, Jr. (Cannon Mills Co.). Am. Dyestuff Reptr. 47: P489-P490 (July 14, 1958). (3057)

USE OF ACTIVATED SILICA IN WATER FOR TEXTILE FINISHING. F. A. Prisley. J. Am. Water Works Assoc. 49: 459-463 (1957). Through Chem. Abstr. 51: 10800h (1957). (3058)

Activated silica is described. Its use under proper conditions increases speed of formation, as well as size, density, and strength, of the alum floc. The prospect of increasing the density of the floc was the reason for the work described. Chlorine is used to activate the silica. The floc now settles rapidly.

REVIEW OF THE LITERATURE OF 1957 ON SEWAGE, WASTE TREATMENT, AND WATER POLLUTION. H. Heukelekian and others. Sewage and Ind. Wastes 30: 601-633 (May 1958); 717-756 (June 1958); 839-873 (July 1958). (3059)

Part 1. Analytical methods and sewage. 157 references. Part 2. Industrial wastes, including radioactivity. 236 references. Textile and wool scouring wastes, p. 734-735. Part 3. Water pollution. 211 references.

TREATMENT OF MIXTURES OF TEXTILE WASTE AND DOMESTIC SEWAGE. R. H. Souther and T. A. Alspaugh (Cone Mills Corp.). Am. Dyestuff Reptr. 47: P480-P488, P490 (July 14, 1958). (3060)

This paper is a discussion of research at Cone Mills to evaluate combined treatment against separate treatment with and without pretreatment. The methods investigated include physical, chemical, and biological processes, particularly the effect of lagooning as an aid to waste treatment. Conclusions indicate that biological treatment of combined textile waste and domestic sewage without chemical pretreatment is practical and economical. Lagooning can be expected to reduce both initial cost and operating expenses. Tables. 18 references.

SCIENCES G

CHEMISTRY G 1

MOLECULAR WEIGHT OF NATIVE CELLULOSES. T. E. Timell. Svensk Paperstidn. 60: 836-842 (1957). In English. (3061)

Twenty-two different materials were studied, including celluloses from seed hairs, bast fibers, grasses, and woods. In each case the cellulose component was isolated by direct nitration of the untreated cellulosic material under conditions ensuring both maximum yield and minimum degradation. Tables. Graphs. 26 references.

DEFOAMING OF SYNTHETIC DETERGENT SOLUTIONS BY SOAPS AND FATTY ACIDS. H. Peper (Lever Bros. Co.). J. Colloid Sci. 13: 199-207 (June 1958). (3062)

The foam stabilities of many different systems were measured, and the character of the film at the air-water interface was studied under carefully controlled conditions. Some of the conditions necessary for foam stability of detergents in the presence of fatty acids were determined. In addition, the research on the penetration of calcium stearate films suggested a mechanism for the destruction of nonsoap detergent foam by soap and fatty acids. Graphs. Table. 6 references.

MODERN TECHNIQUES IN THE STUDY OF WOOL STRUCTURE. PARTS 1 AND 2. F. O. Howitt and A. Robson. J. Textile Inst. 49: P236-P244 (June 1958). (3063)

Part 1 is a general indication of the techniques that have so far been used, and, more especially, a brief description of the progress that has been made. Part 2 is a discussion of the special chemical techniques that have been developed in the laboratories of the Wool Industries Research Association. 34 references.

MISCELLANY H

PROPOSED TERMINOLOGY REFERRING TO FINISHING. Danish Comm. for Textile Terminology. Tidsskr. f. Textiltek. 15, No. 11: 201-202 (1957). In Danish. Through BCIRA 38: 95 (1958). (3064)

This is the 11th of provisional proposals containing Danish, Norwegian, Swedish, French, English, and German terms referring to finishing treatments of textiles (mothproofing, waterproofing, rotproofing, antifelting, shrinkproofing, flameproofing, antislip finishing).

TRENDS IN WOOL RESEARCH. H. Zahn. Textil-Rundschau 12, No. 11: 611-622 (1957). In German. Through BCIRA 38: 61 (1958). (3065)

The development of protein chemistry and its effect on wool research are discussed, with reference to literature data on morphological characteristics, the shape of the molecule, supercontraction, chemical composition, molecular weight, the roles of cystine, tyrosine and tryptophan, dyeing theories, chemical modification, chemical testing, and examination of morphological and physical changes in wool during processing and wear. 59 references.

GLOSSARY OF TRADE TERMS AND DEFINITIONS FOR THE TEXTILE INDUSTRY. Intern. Business Machines Corp., 590 Madison Ave., New York 22, N. Y. n.d. 65 p. (3066)

THIRD INDUSTRIAL TEXTILES TRADE FAIR REPORT. Textiles in Ind. 3: 36-42 (May 1958). (3067)

MANMADE FIBERS INDUSTRY. R. Robson. Macmillan & Co. Ltd, London; St. Martin's Press Inc., 103 Park Ave., New York 17, N. Y. 1958. 135 p. $5.00. (3068)

The economic side of the manmade fibers industry is discussed under the headings: processes, development, structure, prices and costs of production, natural fibers and other competing materials, and fiber properties and interfiber competition. An appendix takes up the chemistry of manmade fiber production.

MANUAL OF TEXTILE INDUSTRY OF CANADA 1958. Canadian Textile Journal Pub. Co. Ltd, 223 Victoria Ave., Westmount, Montreal 6, Quebec. 1958. 262 p. (3069)

Contains articles on the technology and economics of the Canadian textile industry, machinery developments, and textile research. A buyers' guide section, mill directory, and a textile technical and trade association directory are also included.

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington, 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

PATENTS: FIBERS
Abstr. 3070 - 3075

PATENTS: YARN PRODUCTION
Abstr. 3076 - 3079

FIBERS A

MANMADE FIBERS A 2

CRIMPED THREADS OR FIBERS OF POLYMERIC CAPROLACTAM. Farbwerke Hoechst AG. BP 750 652, June 20, 1956. Through BCIRA 37: 216 (1957). (3070)

Card sliver of polymeric ε-caprolactam containing some low-molecular and monomeric lactam (e.g. 7%) is stretched, crimped mechanically, washed without tension in hot water to remove the lower fraction, dried without tension, and, if desired, cut to staple. The product resembles merino wool.

HOLLOW VISCOSE FILAMENTS. I. Kosuge (to Toyo Rayon Co. Ltd). USP 2 835 551, May 20, 1958. (3071)

Hollow filaments containing uniformly distributed small gas cells are produced by adding alkali carbonates to the conventional spinning bath.

DRY SPINNING PROCESS FOR C-SHAPED HOLLOW CELLULOSE ACETATE FIBERS. A. S. Smith (to Eastman Kodak Co.). USP 2 838 364, June 10, 1958. (3072)

The fibers have increased luster, stiffness, and bulk.

DRY SPINNING PROCESS FOR CELLULOSE ACETATE FIBERS WITH FLAT CROSS-SECTION. C. A. Jarrett (to Eastman Kodak Co.). USP 2 838 365, June 10, 1958. (3073)

Fabrics woven from these fibers have unusual scintillating characteristics.

PRODUCTION OF ALL SKIN RAYON. M. R. Lytton (to Am. Viscose Corp.). USP 2 841 462, July 1, 1958. (3074)

The extruded viscose contains from about 0.5% to about 4% of an alkali-soluble polyoxyalkylene glycol ether of p,p'-diphenol.

PROCESS OF PRODUCING ALL SKIN RAYON. M. B. Hayes (to Am. Viscose Corp.). USP 2 841 463, July 1, 1958. (3075)

The extruded viscose contains from about 0.4% to about 3% of a phenyldiamine.

YARN PRODUCTION B

PERMANENTLY CRIMPING SUPERPOLYAMIDE YARNS. Cotonificio Lombardia SA. BP 742 352, Dec. 21, 1955. Through BCIRA 38: 180 (1958). (3076)

The yarn (e.g. 30 to 60 denier nylon) is successively twisted up to at least 3,000 turns per meter, wound on a rigid support, exposed to saturated steam at 110-115° C for 3-3 1/2 hr, and then untwisted.

APPARATUS FOR STAPLING CONTINUOUS FILAMENTS IN TOW OR BUNDLE FORM. Algemene Kunstzijde Unie NV. BP 791 378, Feb. 26, 1958. Through BCIRA 38: 205 (1958). (3077)

The tow is caused to travel in a zig-zag course by means of a pair of discs with pins projecting axially and equally spaced circumferentially, and cut by a rotary knife between the bends. One disc has notches between the pins into which the pins of the other disc can pass and serve to drive it. To prevent slip, the tow is pinched between the pins and coacting rubber-tired rollers.

MANUFACTURE OF PERMANENTLY CRIMPED SYNTHETIC YARNS. Heberlein & Co. AG. BP 791 610, Mar. 5, 1958. Through BCIRA 38: 236 (1958). (3078)

Means for crimping thermoplastic threads (e.g. nylon monofils and yarns) by folding two or more together in the plastic state in a heating and false-twisting apparatus followed by separation and winding of the individual set threads. The ends are fed under individually controlled, equal tensions through guide channels located at the corners of a regular polygon and similar guide plates are used in winding the separated, crimped ends. It is claimed that uniform crimps and easier separation result.

YARN TENSION REGULATOR. K. Lehner (to Vereinigte Glanzstoff Fabriken AG). USP 2 837 298, June 3, 1958. (3079)

Yarn tension regulators consist of opposing lattice brakes providing decreased frictional resistance to yarn travel and (mounted between the brakes) spring loaded yarn guides which, according to the required increase or decrease in yarn tension, conduct the yarn into or out of the brakes.

SUCTION HEAD MOUNTING FOR VACUUM CLEARING SYSTEMS. W. W. Hewitt (to Spinsavac Corp.). USP 2 837 774, June 10, 1958. (3080)

Mounting for adjustably supporting the suction head adjacent to the lower front roll of drafting machines.

CRIMPED SYNTHETIC YARN. M. H. Comer (to Patentex Inc.). USP 2 837 889, June 10, 1958. (3081)

Produced by twisting ends of monofilaments in one direction while heating to set the twist, immediately twisting the yarn in the opposite direction, and repeating the process throughout the length of the yarn.

TEXTILE LUBRICANT. L. W. Sproule and J. H. Norton (to Esso Research & Eng. Co.). USP 2 839 464, June 17, 1958. (3082)

Mineral base oil which is nonreactive with calcium consists essentially of a mineral oil distillate containing small amounts of nonionizing oil-soluble components acting as a detergent, emulsifier, and stabilizing agent.

OPENING, PICKING, FIBER PREPARATION B 1

COTTON OPENING AND CLEANING MACHINE. Z. Szaloki (to Whitin Mach. Works). USP 2 836 858, June 3, 1958. (3083)

Machine with parallel beater cylinders equipped with beater pins moving in opposite directions.

FIBER OPENING MACHINE. A. Boer (to Bancroft-Brillotex Intern. SA). USP 2 838 804, June 17, 1958. (3084)

Mechanism operating on an opposed double-acting principle consists of sets of disks with opposed barbs which seize the fibers on both sides and open them completely without damage.

CARDING AND COMBING B 2

APPARATUS FOR DRAWING OFF DUST AND FLY FROM BENEATH A CARDING ENGINE. J. C. Heslip (to William Ewart & Son Ltd). BP 791 082, Feb. 26, 1958. Through BCIRA 38: 209 (1958). (3085)

The apparatus consists of a shallow "well" connected through one wall with an exhaust system, and a rotating, bladed, flat-conical member for directing the dust and fly down the exhaust pipe.

CARDING ENGINES. L. W. Tsing. BP 791 339, Feb. 26, 1958. Through BCIRA 38: 209 (1958). (3086)

Means for creating air currents in the region of the nose of the dish plate, blowing towards the surface of the takerin, so as to cause all the fibers to adhere to the saw teeth of the takerin without bending down, thus undergoing efficient combing. The takerin cylinder is perforated and a curved baffle is located inside it to form a suction duct the inlet of which is adjacent to the nose of the dish plate and the outlet adjacent to an external exhaust conduit.

AUTOMATIC CARD STRIPPING APPARATUS. S. Suzuki (Japan). BP 791 472, Mar. 5, 1958. Through BCIRA 38: 235 (1958). (3087)

The stripper has a suction nozzle mounted on a traversing member, the opening in the nozzle being elongated in the circumferential direction of the card cylinder or doffer so that fiber can be drawn out from between the needle points and returned to the lap.

DRAWING AND ROVING B 3

STOP MOTION FOR DRAWING, ROVING, OR THE LIKE FRAMES. J. A. Harris (to William Ewart & Son Ltd). BP 790 849, Feb. 19, 1958. Through BCIRA 38: 179 (1958). (3088)

The invention relates to a stop motion device in which a broken sliver or roving falls on a lightweight counterbalanced roller and causes it to roll down an incline and switch off the drive.

TOP WEIGHTING ROLLS FOR DRAFTING MACHINES. SKF Kugellagerfabriken GmbH. BP 791 145, Feb. 26, 1958. Through BCIRA 38: 210 (1958). (3089)

Releasable means for coupling a sleeve to the outer race ring of a top roll bearing, so as to prevent undesired longitudinal movement of the parts. The coupling member has a tubular portion split for some distance from one end to increase its resilience and circumferentially beaded at the split end to engage a groove in one of the parts it couples together. The member may be carried by the other part.

SLIVER WINDING MACHINE. G. P. Wilby. BP 791 290, Feb. 26, 1958. Through BCIRA 38: 209 (1958). (3090)

Machine for winding sliver on to bobbins is provided with an endless chain belt (or two belts in parallel) for conveying bobbins to the winding position.

SLIVER EVENER DEVICE. F. Calzone (Italy). USP 2 836 857, June 3, 1958. (3091)

Pair of gauge cylinders, interposed between the feed and drafting cylinders of a spinning machine, which measure the sliver thickness and control the speed of the feed cylinders in accordance with the variations in thickness of the sliver.

DRAFTING ROLL COT. J. Rockoff (to Dayton Rubber Co.). USP 2 837 775, June 10, 1958. (3092)

Small amounts of soft, fibrous nutshells are incorporated in the synthetic rubber cover.

SPINNING, WINDING, TWISTING B 4

BALLOON CONTROL RING. K. Ward (to Fairbairn Lawson Combe Barbour Ltd). BP 791 950, Mar. 12, 1958. Through BCIRA 38: 236 (1958). (3093)

Balloon control ring is covered by a plastic annulus which may be formed of polythene and applied by dipping or spraying or separately prepared and sprung into position.

BOBBIN SUPPORT AND DRIVE FOR SYNTHETIC YARN WINDING MACHINES. Industrie Werke Karlsruhe AG. BP 788 244, Dec. 23, 1957. Through BCIRA 38: 110 (1958). (3094)

CAM MECHANISM FOR OPERATING THE TRAVERSE MOTION OF AN UPTWISTING MACHINE. W. E. James (to T. M. M. (Research) Ltd). BP 791 137, Feb. 26, 1958. Through BCIRA 38: 210 (1958). (3095)

CONTROLLING AIR FLOW IN PNEUMATIC END CATCHER SYSTEMS FOR SPINNING FRAMES. B. Sydbom (to AB Svenska Flakt Fabriken). BP 791 886, Mar. 12, 1958. Through BCIRA 38: 236 (1958). (3096)

The total amount of air sucked out by the exhaust fan is kept constant automatically by providing each catcher unit with a two-way damper, preferably within the filter chamber, which is reversed by means actuated from the driving motor so that when the frame stops the connection to the suction nozzles is automatically cut off and the suction pipe is connected directly with the spinning room.

BALLOON CONTROL RING. T. Nesbit-Dufort and K. Ward (to Fairbairn Lawson Combe Barbour Ltd). BP 792 004, Mar. 19, 1958. Through BCIRA 38: 236 (1958). (3097)

Self-threading balloon control ring has an entrance slot inclined to the tangent to the ring surface at the point of entry and is mounted for rotation through 180° about a diameter without removal from its support.

TWO-FOR-ONE TWISTER. A. W. Vibber. USP Reissue 24 483, June 10, 1958. Original No. 2 731 785, Jan. 24, 1956. (3098)

Means for synchronizing the feeding speeds of the two strands immediately adjacent the point of plying.

ROVING UNTWISTING DEVICE. W. Frenzel (Germany). USP 2 836 955, June 3, 1958. (3099)

Gripping device for untwisting roving shortly before it enters the feed rollers of a spinning frame.

RING SPINNING MACHINES. J. Sutter (France). USP 2 838 903, June 17, 1958. (3100)

Twisting element located between the drawing rolls and a traveler so that twisting takes place close to the drawing rolls, thus curtailing yarn breakage.

FLYER FOR UPTWISTER. F. Ridgway (to Arundel, Coulthard & Co. Ltd). USP 2 838 904, June 17, 1958. (3101)

A flyer for use in the uptwisting of yarn from double-flanged bobbins has a renewable and self-threading yarn guide located in a cut-away portion of the rolled edge of the flyer cap that revolves around the upper flange of the bobbin. The guide is formed of a piece of bent wire.

YARN ILLUMINATOR FOR USE ON SPINNING MACHINES. C. O. Meiners, W. Lessing, and W. B. Lessing (to Meiners Optical Devices Ltd). USP 2 839 669, June 17, 1958. (3102)

UPTWISTER. F. B. Breazeale (to Am. Enka Corp.). USP 2 839 887, June 24, 1958. (3103)

Apparatus for closely controlling twist variation for long lengths of yarn.

BOBBIN HOLDER. G. Fusaroli (to Sampre SA Meccanica Precisione). USP 2 840 321, June 24, 1958. (3104)

Bobbin holder which may be easily dismantled for replacement of worn and broken parts or for cleaning.

YARNS B 5

MANUFACTURE OF STRETCH/BULK YARN BY FALSE TWIST PROCESS. R. S. Gilchrist and D. A. E. Mattingley (to Klinger Mfg. Co. Ltd). BP 788 944, Jan. 8, 1958. Through BCIRA 38: 115 (1958). (3105)

Nylon, Perlon, or Terylene yarn is drawn past a device that prevents twisting at that point, a heated device that renders it plastic, a false-twisting device, a device, at a lower temperature, for making it plastic again, and a device for inserting false twist in the opposite direction.

ROPES, ROPE SPLICES, STRANDS, OR CORES. R. E. Campbell (to Brit. Ropes Ltd). BP 789 163, Jan. 15, 1958. Through BCIRA 38: 116 (1958). (3106)

Use of a gelled thermoplastic material (e.g. polyvinyl chloride and nylon) for filling the spaces between fibers comprising a rope splice, strand, or core. A list of advantages includes improved tensile behavior, resistance to fatigue, and exclusion of corrosive agents.

METHOD OF PRODUCING BONDED TWISTLESS YARN. B. Lawrence (to Fiberbond Labs.). USP 2 834 704, May 13, 1958. (3107)

Apparatus for saturating a continuous series of overlapping staple length fibers with an adhesive and gathering the saturated fibers into a continuous, twistless ribbon.

BONDING BUTYL RUBBER TO TIRE CORDS. E. Cousins (to Goodyear Tire & Rubber Co.). USP 2 835 624, May 20, 1958. (3108)

Butyl rubber is mixed with an organic isocyanate and an aromatic dinitroso compound or dioxime to improve its adhesion to tire cords.

TIRE CORDS AND FABRICS. F. E. Drummond and L. J. Novak (to Commonwealth Eng. Co.). USP 2 839 119, June 17, 1958. (3109)

Tire cords and fabrics characterized by improved flex life at high temperatures are obtained by treating cords made of cotton, rayon, nylon, or other such fibers with a solution or dispersion of dextran.

BLACK PIGMENTED YARN. A. W. Hay (to Celanese Corp.). USP 2 839 420, June 17, 1958. (3110)

Deep black synthetic yarn produced by incorporating carbon black with a small proportion of titanium dioxide in the spinning solution.

IMPROVED ADHESION OF NYLON TIRE CORD TO BUTYL RUBBER. J. J. Fleming (to U.S. Rubber Co.). USP 2 839 443, June 17, 1958. (3111)

The butyl rubber is partially modified by heating with a 4-hydrocarbon-2,6-dimethylolphenol, a cashew nutshell oil modified novolac phenol-formaldehyde resin, and a methylene-yielding hardening agent.

FABRIC PRODUCTION C

YARN TENSION DEVICE. NV Onderzoekingsinstituut Research. BP 792 570, Mar. 26, 1958. Through BCIRA 38: 270 (1958). (3112)

The tension in a running yarn is increased by guiding it between two cooperating toothed rollers, one braked in a slipping manner with respect to the other with a constant resistance, an additional force being exercised on the indirectly braked roller by wrapping the yarn over an arc of this roller immediately after it passes between the two rollers.

YARN CONTROL DEVICE. J. Gift (to Rosedale Knitting Co.). USP 2 838 922, June 17, 1958. (3113)

Device for preventing snarling and overfeeding of stretch or rubber-covered yarn while it is being withdrawn from a spirally wound conical or cylindrical package, e.g. during knitting.

TENSION DEVICE. F. H. Lassiter. USP 2 838 923, June 17, 1958. (3114)

Device for feeding yarn under uniform tension irrespective of the type of yarn and the speed at which the yarn is taken up.

WARPING, SLASHING, YARN PREPARATION C 1

WARP SIZING FOR LOOM-FINISHED FABRICS. Farbenfabriken Bayer AG. BP 788 945, Jan. 8, 1958. Through BCIRA 38: 120 (1958). (3115)

The warp is dressed with an aqueous solution of (1) an acrylamide or methylacrylamide polymer, (2) a methylol compound of urea, thiourea, melamine, guanidine, or dicyandiamide, and (3) a catalyst, and then dried at about 70° C. The warp or fabric woven from it is finally baked at about 130° C.

WARP BEAMING FRAMES. H. C. Worth and H. Lumb (to Wm. Whiteley & Sons Ltd). BP 790 562, Feb. 12, 1958. Through BCIRA 38: 181 (1958). (3116)

A variable speed mechanism is interposed in the drive for a warp beam so that its speed of rotation is varied in accordance with the relative axial disposition of the beam and the drum of warping frame from which it is fed.

BOBBIN STRIPPING. R. Ferguson (to Terrell Mach. Co.). USP 2 838 824, June 17, 1958. (3117)

Bobbin handling arrangement for supporting and moving hanging bobbins for stripping.

APPARATUS FOR FEEDING COP CORES TO WINDING SPINDLE. Officina Meccanica Bruegger SpA. BP 790 814, Feb. 19, 1958. Through BCIRA 38: 181 (1958). (3118)

The apparatus consists of a magazine from which the cores pass one by one to a receiver that conveys them to a support on which they are held by a permanent or electromagnet while they are being presented to the spindle. The supporting device is mounted on a carriage displaceable by a counterweight.

BEAM SUPPORTING DEVICE. Gebrüder Sucker GmbH. BP 791 084, Feb. 26, 1958. Through BCIRA 38: 212 (1958). (3119)

Warp or cloth beam is supported by driven stub shafts and a connecting device between at least one stub shaft and its drive that provides the shaft at least one degree of freedom.

WARP BEAM BRAKES. J. M. Green. BP 791 233, Feb. 26, 1958. Through BCIRA 38: 212 (1958). (3120)

Manually operated vice-like tool for braking a beam spindle, pike, or ruffle to control yarn tension. The force is exerted by a pair of shoes lined with friction brake material and these are opened for removal or tightened by turning a handle on which the setting is indicated by a set of numbers.

BOBBIN WINDING APPARATUS. Soc. Rhodiacéta. BP 791 896, Mar. 12, 1958. Through BCIRA 38: 238 (1958). (3121)

In the winding of bobbins with a conical cheek at each end (the familiar cotton reel), the slotted thread guide oscillates about a fixed point through a constant amplitude but just before reversing its direction it receives a sudden increase in angular velocity and returns to normal slightly after the reversal.

STOP MOTION FOR FRICTION DRIVE WINDING MACHINE. F. J. Baumann and J. M. Bloomfield (to Industrial Rayon Corp.). USP 2 837 291, June 3, 1958. (3122)

WEAVING C 2

WEFT STOP MOTION DEVICE. M. D. Duran. BP 790 643, Feb. 12, 1958. Through BCIRA 38: 182 (1958). (3123)

The weft holds up a pin mounted at one end of a counterweighted shaft on a rocking member operated by the general loom mechanism. If the weft fails the shaft turns, actuates a catch, and the loom stops.

HEDDLE LEVELING E. Liebscher, G. Hauptmann, and A. Haupt (to VEB Webstuhlbau Neugersdorf). BP 792 458, Mar. 26, 1958. Through BCIRA 38: 270 (1958). (3124)

The alternating lifting levers for the heddles are each linked to a control arm pivoted on a fixed pivot and clamped in parallel alignment by means of cam elements.

AUTOMATIC PIRN CHANGING LOOMS WITH ROTARY MAGAZINES. I. H. Thomas and J. F. Moseley (to Brit. Cotton Ind. Research Assoc.). BP 790 858, Feb. 19, 1958. Through BCIRA 38: 182 (1958). (3125)

Application of a suction device to looms having rotary magazines (e.g. single shuttle Northrop looms) for the purpose of removing trails of weft left after the pirn changing operation. Details are given of a simple modification for removing the new weft trail formed by the first pick of a fresh pirn and of a preferred device for removing also the old weft trail severed by the shuttle-eye cutter.

AUTOMATIC SHUTTLE CHANGING. H. D. Walker and J. Eskdale (to WEM Auto-Looms Ltd). BP 791 626, Mar. 5, 1958. Through BCIRA 38: 238 (1958). (3126)

Pivoted shuttle loader, rocked by mechanism operated from a weft feeler, is fitted with a cam comprising an arcuate track with a peak or critical point midway. A pivoted arm or lever follows the track by means of a roller and urges the loader into one position until the critical point is reached, after which the loader is urged into another extreme position.

RIBBON LOOM AUTOMATIC SHUTTLE CHANGING. G. M. V. J. Choupin. BP 792 344, Mar. 26, 1958. Through BCIRA 38: 270 (1958). (3127)

To reduce weaving defects in automatic ribbon weaving with shuttles that have exchangeable fronts and bases that remain in the shuttle race, each magazine for the fronts is fitted with an auxiliary support on which each exhausted front is held close to the fabric (by elastic spring claws) during several picks from the next front before its weft is severed and then removed (by traction or a thrust).

SHUTTLELESS LOOM. D. W. Shimwell (to Weaving Research & Textile Commn. Agents Ltd). BP 792 378, Mar. 26, 1958. Through BCIRA 38: 270 (1958). (3128)

In a loom in which weft from a stationary package at the side of the loom is inserted into the warp shed by a spear, a constant length of yarn between the package and the spear is maintained by a linkage system of elbow form pivoted at one end to the rear of the spear and at its other end to a fixed part of the loom. The weft passes through guides at the pivotal points and at the elbow joint where the links are interconnected.

HEDDLES. Grob & Co. AG. BP 792 441, Mar. 26, 1958. Through BCIRA 38: 270 (1958). (3129)

To facilitate the separation of heddles by the needle of a drawing-in machine, at least one edge of the heddle is at least partly chamfered

HEDDLE CONSTRUCTION. E. E. Sides (to Steel Heddle Mfg. Co.). USP 2 840 114, June 24, 1958. (3130)

In a loom harness, in which the warp is entered by means of an automatic drawing-in machine and the heddles are alternately of different forms, the end portion of each of the heddles of one form differs from that of the other form to permit visual detection of improper pairing.

LOOM LETOFF. C. P. Bergstrom (to Crompton & Knowles Loom Works). USP 2 837 123, June 3, 1958. (3131)

Gear arrangement capable of different settings to permit the use of the letoff over a wide range of fabrics with respect to the number of picks per inch.

SHUTTLELESS LOOM. V. M. J. Ancet and M. Fayolle (France). USP 2 837 124, June 3, 1958. (3132)

Loom in which shedding, weft feeding, and beatup are all controlled by a common vertical shaft.

SHUTTLE CHANGE MAGAZINE. E. A. Butin (France). USP 2 837 125, June 3, 1958. (3133)

Shutter mechanism for chutes arranged in a radial or star-shaped manner which makes it possible to send the shuttles to a fixed point while insuring their continuous guidance.

WIRE CLOTH LOOM TUCKING MECHANISM. C. E. Webber and L. K. Watson, Jr. (to N.Y. Wire Cloth Co.). USP 2 839 090, June 17, 1958. (3134)

SHUTTLE GUIDE FOR CHANGE BOX LOOMS. S. O. Dodge (to H. F. Livermore Corp.). USP 2 839 091, June 17, 1958. (3135)

SUPERVISORY CONTROL CIRCUIT FOR LOOMS. B. B. Purdy and A. T. Godschalx. USP 2 839 092, June 17, 1958. (3136)

Electrical circuit for controlling the uniformity of spacing between adjacent wefts by continual automatic observance of the beat line position.

DROPPER JACQUARD MECHANISM. F. H. Haslam-Jones (to John Jardine Ltd). USP 2 839 962, June 24, 1958. (3137)

Mechanism with spring cancelling means for restoring droppers from their projected to their nonprojected positions at each cycle.

SELF-THREADING SHUTTLE EYE. H. S. Pellatt. USP 2 840 115, June 24, 1958. (3138)

QUILL FEEDING APPARATUS. D. F. Pearce and R. L. Freeman. USP 2 840 116, June 24, 1958. (3139)

Gravity fed means for filling a loom battery, so that the quill boxes may be used without rearrangement of the stacked quills.

SELVAGE AND SEAM FORMATION. T. M. Scruggs (to Bemis Bros. Bag Co.). USP 2 840 117, June 24, 1958. (3140)

Method of making a selvage in a leno-woven open-mesh fabric which, after weaving, is split, folded, and seamed to form bags.

KNITTING C 3

KNITTING A BACKED FABRIC WITH BINDING THREAD. J. Deiss and J. Dvorak (to Vyzkumny, Czechoslovakia). USP 2 836 970, June 3, 1958. (3141)

The fabric is knitted on a circular machine in such a way that the facing yarn remains on the right side of the fabric thus covering both the binding and backing yarn.

FASHIONING MECHANISM FOR STRAIGHT BAR KNITTING MACHINE. J. C. Arentz (to Textile Mach. Works). USP 2 836 971, June 3, 1958. (3142)

Mechanism for automatically controlling the combs in fashioning outerwear having outer and inner shaped selvage edges.

HAND OPERATED KNITTING MACHINE. E. Luchsinger (to Fibra AG). USP 2 837 903, June 10, 1958. (3143)

WARP LETOFF CONTROL MECHANISM FOR WARP KNITTING MACHINE. A. E. Winslow and M. M. Waldrop (to J. P. Stevens & Co.). USP 2 838 921, June 17, 1958. (3144)

PORTABLE TRUSSED SKID BOX FOR TRANSPORTING KNITTING MACHINE WITHOUT DISMANTLING. G. M. Turner. USP 2 839 309, June 17, 1958. (3145)

WIDENING AND NARROWING MEANS FOR CIRCULAR KNITTING MACHINES. H. E. Crawford (to H. E. Crawford Co.). USP 2 839 906, June 24, 1958. (3146)

Individually controlled widening picks are combined with variable capacity narrowing picks so that narrowing takes place with successive movements of the needle cylinder in one direction, and widening takes place with intervening movements of the needle cylinder in the other direction.

AUTOMATIC LENGTH CONTROL MECHANISM FOR CIRCULAR HOSIERY MACHINES. V. H. Butler (to Burlington Inds.). USP 2 839 907, June 24, 1958. (3147)

STRAIGHT BAR KNITTING MACHINE. P. G. McCarthy and D. Winfield (to William Cotton Ltd). USP 2 839 908, June 24, 1958. (3148)

Anti-rebound mechanism for yarn carriers in straight bar machines having a flexible drive control mechanism.

FABRICS C 4

MANUFACTURE OF NONWOVEN PILE FABRICS. Etablissements Girond Frères. BP 789 353, Jan. 22, 1958. Through BCIRA 38: 148 (1958). (3149)

Layers of erect fibers are cut from a sheet of parallelized fibers and glued to a support, or sprayed with an adhesive that dries to form a backing. A machine for the purpose incorporates a circular cutter that slides against the inner face of a fixed rectilinear cutter forming one wall of the guide that leads the cut bands to the glueing device.

FABRIC INTERLINING FOR COLLARS. L. Bihaly, G. Meier, and A. W. Lockwood (to Trubenised (Gt. Brit.) Ltd). BP 789 515 and 789 516, Jan. 22, 1958. Through BCIRA 38: 147-148 (1958). (3150)

An interlining fabric is woven with alternate parallel zones containing potentially adhesive yarns and intermediate zones without such yarns, of such widths that when a blank for the interlining is cut the stiffer portion comes in the top parts of the collar and the other portion in the band.

PRODUCTION OF PILE CARPETS. M. W. Tchekmeian (France). BP 790 498, Feb. 12, 1958. Through BCIRA 38: 182 (1958). (3151)

Bundles of fibers (e.g. yarns) are packed tightly in a flat drawer and wrapped in stout paper. Slices are then cut, of the required pile height, by advancing the assembly through the drawer. The slices are placed side by side, with the fiber vertical, on a perforated plate, sufficient space being left between them to allow for expansion when the paper wrapping is removed. The paper is torn off and the plate is lifted into a bath of latex, to a depth and for a period sufficient to allow the fiber to be coated to a desired height. The plate is then drained and dried and the latex is vulcanized.

PRODUCING LOOP PILE FABRIC. P. Reinhard (Germany). BP 790 649, Feb. 12, 1958. Through BCIRA 38: 182 (1958). (3152)

Fabric is continuously pressed into a looped (corrugated) form and attached to an adhesive base. The corrugations are produced by means of heated rollers with cog-like teeth.

CURTAIN HEADING TAPE. J. R. Lilley (to Narrow Fabrics (Lilleys) Ltd). BP 790 851, Feb. 19, 1958. Through BCIRA 38: 182 (1958) (3153)

The additional warp threads that serve as loops for inserting the curtain hooks are woven close together to form floats. They may be of cords, covered wires, knitted tubes, or synthetic fiber and are preferably of a distinctive color.

JOINING THE EDGES OF WOVEN FABRICS. J. S. Plenderleath (to Jute Inds. Ltd). BP 791 074, Feb. 26, 1958. Through BCIRA 38: 212 (1958). (3154)

One selvage of a fabric is woven with ends of thermoplastic yarns or tapes instead of the normal warps and the loom is fitted with heated rollers to make a bound selvage and a cutting device to trim off the fringe of weft loops. Two such fabrics are firmly united by heating and pressing together their overlapping bound selvages.

FUR-LIKE FABRICS. E. Bechetoille (to Soc. d'Etudes du Textile SeT). BP 792 388, Mar. 26, 1958. Through BCIRA 38: 271 (1958). (3155)

Several layers of chenille threads are laid down in an appropriate arrangement on a carrier provided with holding teeth, transferred to a backing fabric, and sewn in position.

METHOD OF FORMING FIBERGLASS REINFORCED RESIN LAMINATED FABRICS AND TUBING. C. Donaldson. USP 2 803 576, Aug. 20, 1957. (3156)

Ends of glass (or other) yarn are continuously laid on a dense highly absorbent paper (i.e. kraft) which has been thoroughly impregnated with uncured resin. The web is then cured.

NONWOVEN ABSORBENT PRODUCT. R. J. Spahr, J. K. Sumner, and E. J. Yedlick (to Chicopee Mfg. Corp.). USP 2 833 283, May 6, 1958. (3157)

Soft, strong, sterilizable nonwoven fabrics suitable for use in covers for absorbent pads are bonded with an internally plasticized polyvinyl acetate in the form of a copolymer of vinyl acetate and an alkyl acrylate or methacrylate.

GLASS FIBER ROVING REINFORCED SYNTHETIC RESIN SHEETS. J. F. Gibb (to Nat. Tank Co.). USP 2 834 702, May 13, 1958. (3158)

Reinforced synthetic resin plate for use in tanks or other fluid enclosures which includes as an inner layer a rubber-like membrane to prevent cracking due to flexing during construction.

PORTABLE TUFTING MACHINE. T. F. Gifford (to Ten-Tex Corp.). USP 2 837 045, June 3, 1958. (3159)

Hand guided machine with means for adjusting both the needle stroke and stitch length.

BACTERICIDAL NONWOVEN FABRIC. G. V. N. Morin (to Chicopee Mfg. Corp.). USP 2 837 462, June 3, 1958. (3160)

Nonwoven fabrics for use as covers for diapers or sanitary napkins are impregnated with a quaternary ammonium compound having bacteristatic action.

LACE WEB SEPARATION. R. E. Langlois, H. A. Boulay, and L. G. Blumenbaum (to Technical Serv. Inc.). USP 2 837 808, June 10, 1958. (3161)

Apparatus for producing lace strips from long webs of lace strips connected by longitudinal draw threads and transverse connector threads.

KINKY WOOLEN PILE FABRIC. F. H. Muller (to Specialties Develop. Corp.). USP 2 837 809, June 10, 1958. (3162)

Fabrics containing a kinky woolen pile are produced by wetting woolen ply yarn, stretching the wet yarn, winding, and drying it. This yarn is then used as the pile yarn in a woven, knitted, or tufted fabric. When the fabric is moistened, the yarn becomes kinky.

WEB TENSION CONTROL. J. J. Tomasch. USP 2 838 252, June 10, 1958. (3163)

A rapid acting brake and adjustable spindle mechanism used in a frame which carries a rolled web, such as paper rolls.

ROLL UNWINDING CONTROL SYSTEM. P. W. Jacobsen (to H. G. Weber & Co.). USP 2 838 253, June 10, 1958. (3164)

System for controlling the tension in unwinding rolls of sheet material, i.e. paper.

GLASS FIBER LAMINATES. H. W. Starkweather, Jr. (to E. I. du Pont de Nemours & Co.). USP 2 838 418, June 10, 1958. (3165)

In the preparation of glass fiber reinforced plastics, the adhesion of the fibers to the resin is improved by coating the fibers with a solution of a tetraalkyl titanate and a synthetic resin, and heating to hydrolyze the titanate to titanium dioxide.

LUMINOUS PILE CARPET. H. E. Wadely (to Firth Carpet Co.). USP 2 838 762, June 17, 1958. (3166)

In a carpet design formed by tufts of pile yarn of varying height, the lowest pile yarns are impregnated with zinc sulfide containing a phosphorescent base pigment, casein binder, and a light-transmitting resin.

BACKING FABRIC FEED MECHANISM FOR TUFTING MACHINE. M. M. Beasley. USP 2 840 019, June 24, 1958. (3167)

Drive for the backing fabric feed rolls which prevents any deviation in the rate of fabric feed due to acceleration or deceleration during stopping and starting, or to the inertia of the supply roll from which the fabric is fed.

FINISHING AND CHEMICAL PROCESSING D

FINISHING FABRICS CONTAINING NYLON CRIMPED YARN. L. Pownall (to Brit. Nylon Spinners Ltd). BP 791 960, Mar. 19, 1958. Through BCIRA 38: 243 (1958). (3168)

In a process for dyeing and finishing knitwear made from crimped nylon yarns, the relaxed goods are steamed at super-atmospheric pressure (e.g. 25 lb psi), dyed, and finished (e.g. boarded) at a lower temperature (e.g. 230° F).

CHEMICAL PROCESSES D 1

FLAMEPROOFING SYNTHETIC FIBER FABRICS. A. Bennett, A. Brookes, A. R. Smith, and C. C. Wallis (to Brit. Industrial Plastics Ltd). BP 787 674, Dec. 11, 1957. Through BCIRA 38: 98 (1958). (3169)

Durable, stiff finishes are secured on nylon and Terylene fabrics by impregnation with a solution containing a lower alkyl ether of a methylolurea and a curing agent (e.g. ammonium thiocyanate), followed by mangling, drying, and curing at about 140° C, after a pressure treatment if desired.

SOFTENING AGENTS FOR RAYON AND WOOL YARNS AND FABRICS. Ciba Ltd. BP 787 733 and 787 735, Dec. 18, 1957. Through BCIRA 38: 98 (1958). (3170)

ANTISTATIC COMPOSITIONS. Y. Noguchi, M. Nakatomi, and C. Muto (to Mitsubishi Rayon Co. Ltd). BP 787 941, Dec. 18, 1957. Through BCIRA 38: 98 (1958). (3171)

Antistatic dressing for synthetic resins and fibers is obtained by adding, for example, silicon tetrachloride to a mixture of ethyl acetate, ethyl alcohol, and water.

ANTISOILING TREATMENT. R. White (South Africa). BP 788 020, Dec. 18, 1957. Through BCIRA 38: 98 (1958). (3172)

To protect textiles (e.g. shirts) from soiling, a barrier film of partly neutralized stearic acid is applied to the exposed parts, after washing, and spread by ironing.

ANTISTATIC AGENT. W. Baird, J. W. Batty, A. E. Henshall, and G. T. Jones (to Imp. Chem. Inds. Ltd). BP 788 079, Dec. 23, 1957. Through BCIRA 38: 125 (1958). (3173)

Materials are padded with a solution of a polymeric quaternary ammonium compound, then mangled, dried, baked, and washed.

ORGANIC ALUMINUM WATERPROOFING COMPOUNDS. Farbwerke Hoechst AG. BP 790 624, Feb. 12, 1958. Through BCIRA 38: 245 (1958). (3174)

A series of products for use as water repellent finishes on drycleaned cotton, wool, nylon, and other garments is obtained by the interaction of an aluminum alcoholate or phenolate with an aluminum salt of a monobasic organic acid, e.g. stearic or oleic acid, in an inert solvent. To protect the products against the effects of moisture in storage they may be converted into complexes with compounds of the type of diethyl tartrate or malonate, oximes, nitromethane and acetonitrile.

COMPOSITION FOR FLAMEPROOFING CELLULOSE MATERIAL. J. R. Geigy AG. BP 790 663, Feb. 12, 1958. Through BCIRA 38: 188 (1958). (3175)

CONTINUOUS TREATMENT OF A FIBER FLEECE WITH AN ACID CHLORITE BLEACHING BATH. Spinnfaser AG. BP 790 820, Feb. 19, 1958. Through BCIRA 38: 186 (1958). (3176)

The fleece is conveyed through the bleach liquor on an endless band of open weave fabric made of glass fiber coated with a thermoplastic synthetic resin.

CREASEPROOFING TREATMENT OF FIBROUS MATERIALS WITH RESINOUS CONDENSATION PRODUCTS. F. R. W. Sloan, R. T. S. McKinstry, R. Wilson, and H. L. Hutton (to Brit. Paints Ltd). BP 790 837 and 790 838, Feb. 19, 1958. Through BCIRA 38: 188 (1958). (3177)

FLOCKED FABRIC. Heberlein & Co. AG. BP 791 797, Mar. 12, 1958. Through BCIRA 38: 244 (1958). (3178)

Fabric that is permeable to air is obtained by electrostatically depositing the flock fiber on an adhesive coating on an elastic carrier fabric (e.g. 22 ends and picks per cm of 70 denier 2-ply crimped nylon yarn) and then stretching until the adhesive layer is torn.

WATER REPELLENTS. J. G. Evans and W. S. Meals (to Bradford Dyers' Assoc. Ltd). BP 791 117, Feb. 26, 1958. Through BCIRA 38: 216 (1958). (3179)

Securing water repellent finishes on textile fabrics, wood, paper, and fur that resist weathering and washing better than known finishes by means of mixtures of organo-silicon compounds and polyisocyanates or polyisothiocyanates, or their bisulfite compounds.

METHOD FOR REDUCING THE FOAMING TENDENCY AND ENHANCING THE WETTING POWER OF MERCERIZING LIQUORS. Ciba Ltd. BP 791 166, Feb. 26, 1958. Through BCIRA 38: 216 (1958). (3180)

TREATING SYNTHETIC FIBERS TO REDUCE THEIR TENDENCY TO ELECTROSTATIC CHARGING. NV Onderzoekingsinstituut Research. BP 791 476, Mar. 5, 1958. Through BCIRA 38: 235 (1958). (3181)

The material is immersed in a solution containing polyacrylic acid and the sodium salt of oleyl methyl tauride, dried and baked at 140° C, and treated with a solution of a cation-active compound and dried.

FABRIC ORNAMENTATION. G. Landells and W. Bragg (to Bradford Dyers' Assoc. Ltd and Bleachers' Assoc. Ltd). BP 791 553, Mar. 5, 1958. Through BCIRA 38: 245 (1958). (3182)

The invention relates to the application of compressive shrinkage for the purpose of ornamenting fabrics and plastic sheet materials by causing them to buckle or crinkle. The fabric or sheet is run through the apparatus in contact with a sheet of thick paper; the paper buckles and the surface effect is transferred to the fabric or sheet.

FLAMEPROOFING COMPOSITION FOR COTTON. N. J. Read (to Associated Lead Mfrs. Ltd). BP 791 802 and 791 803, Mar. 12, 1958. Through BCIRA 38: 245 (1958). (3183)

Flameproofing composition that also confers soft handle on lightweight cotton fabrics comprises (1) a dispersion in water of 10-20% of antimony oxide, (2) 30-50% of a plasticizer containing at least 15% of chlorine and compounded of a conventional plasticizer such as dioctyl phthalate or sebacate and highly chlorinated paraffin wax or diphenyl, and the rest (3) polyvinyl chloride or a related vinylic plastic.

APPLYING LANOLIN FINISH TO NYLON HOSIERY. W. F. Doyle and D. L. Copenhaver. USP 2 832 518, April 29, 1958. (3184)

Nylon hosiery with the feel and handle of natural silk is obtained by rinsing with an emulsion of lanolin, removing excess water, and boarding.

GERMPROOFING CELLULOSE FIBERS. K. Lutz and H. Hemmi (to Saul & Co.). USP 2 838 425, June 10, 1958. (3185)

Cellulose fibers may be protected against microorganisms and fungi by impregnation with a product of the reaction of a chlorinated phenol containing a free phenolic hydroxyl with a polymeric nitrogen compound having an affinity for cellulose fibers.

RENDERING CELLULOSE FABRICS WATER REPELLENT. W. R. Collings (to Dow Corning Corp.). USP 2 833 022, May 6, 1958. (3186)

The durability of waterproofing is improved if, after the fabric is treated with an organosilicon compound, it is subjected to mechanical compressive shrinkage and heating at 100° F to cure the silicone.

ANTISTATIC COMPOSITION. A. H. Gruber and W. J. van Loo, Jr. (to Am. Cyanamid Co.). USP 2 836 517, May 27, 1958. (3187)

Certain quaternary ammonium compounds are claimed as antistatic agents for textiles, films, and plastics.

ANTISTATIC FINISH. O. P. Cohen and M. J. Scott (to Monsanto Chem. Co.). USP 2 837 446, June 3, 1958. (3188)

Antistatic agent for unspun synthetic fibers consisting of a quaternary phosphonium salt.

HOSIERY BOARDING APPARATUS. F. M. Southerland. USP 2 837 832, June 10, 1958. (3189)

Movable board supports make it possible to use previously used steam boards on the polygonal wheel claimed.

FINISHING HOSIERY. W. V. Bowman and H. G. Bell (to Adams-Millis Corp.). USP 2 838 217, June 10, 1958. (3190)

Hosiery are positioned on flat, shaped, disposable inserts so that they may be simultaneously boarded and ready for sales distribution.

INLAY EMBOSSED FABRICS. R. S. Babiarz and H. A. Wallace (to Joseph Bancroft & Sons Co.). USP 2 838 416, June 10, 1958. (3191)

Durable color inlays are produced in embossed fabrics by passing a resin impregnated fabric through the nip of an embossing calender having an unheated soft roll with a male pattern and a heated metal roll with a female pattern. A heat hardenable paste containing a pigment, thermosetting resin, and vehicle is applied to the tips of the male pattern, and as the fabric passes through the calender, the paste is transferred from the tips of the pattern to the valley areas.

AMIDOMETHYL QUATERNARY AMMONIUM SILOXANES FOR WATERPROOFING CELLULOSE FABRICS. J. W. Gilkey (to Dow Corning Corp.). USP 2 838 423, June 10, 1958. (3192)

CREASEPROOFING CELLULOSIC TEXTILES. J. T. Marsh, G. Bell, and A. G. Thompson (to Tootal Broadhurst Lee Co. Ltd). USP 2 839 429, June 17, 1958. (3193)

Wet crease resistant cellulosic fabrics are obtained by impregnation with an aqueous solution of a crystalloid intermediate of a synthetic resin, e.g. urea or melamine formaldehyde, and a polysiloxane oil, followed by heating to render the resin insoluble and the oil infusible.

ANTISTATIC AGENTS FOR HYDROPHOBIC SYNTHETIC FIBERS. R. W. Rimmer (to E. I. du Pont de Nemours & Co.). USP 2 839 430 and 2 839 431, June 17, 1958. (3194)

Olefin-type interpolymers of acrylic or methacrylic acid esters are claimed to give durable antistatic finishes.

ANTISTATIC TREATMENT FOR HYDROPHOBIC SYNTHETIC FABRICS. T. F. Cooke, L. J. Moretti, and W. J. van Loo, Jr. (to Am. Cyanamid Co.). USP 2 839 506, June 17, 1958. (3195)

Treatment of fabrics with an aqueous solution of a water-soluble aminotriazine resin and magnesium chloride followed by curing.

APPARATUS FOR THE WET TREATMENT OF YARNS IN WARP FORM. L. H. de Langen (to Am. Enka Corp.). USP 2 839 910, June 24, 1958. (3196)

Apparatus which permits the treatment of very closely spaced yarns at high speeds without troublesome turbulence.

CYANOETHYLATING NATIVE COTTON FIBERS. J. Compton and C. P. Jones (to Inst. of Textile Technol.). USP 2 840 446 June 24, 1958. (3197)

Partially cyanoethylated cotton, retaining the natural physical structure of cellulose, is prepared by circulating in contact with the fibers an emulsion of an aqueous solution of sodium hydroxide in acrylonitrile at 24 to 93° C until the cotton contains 0.5% to 6.5% nitrogen. The cyanoethylated cotton has the appearance, hand, and processing characteristics of cotton, increased abrasion resistance and tensile strength, decreased moisture absorption, and increased affinity for acetate, vat, and sulfur dyes.

DYEING AND PRINTING D 2

DYE JIG. A. Libbrecht and P. Libbrecht (France). BP 787 822, Dec. 18, 1957. Through BCIRA 38: 98 (1958). (3198)

Dye jig with two drums is fitted with a rocker device for spreading the fabric, having a pair of deflecting rollers at the end of each arm. The device rocks towards the drum that is about to receive the fabric in response to a reversal of the travel, but an adjustable abutment prevents it from rocking so far that it might actually squeeze dye liquor out of the fabric.

DYEING CELLULOSE WITH SULFUR DYES. Cassella Farbwerke Mainkur AG. BP 787 878, Dec. 18, 1957. Through BCIRA 38: 97 (1958). (3199)

Cellulose fibers are dyed with sulfur dyes, without reduction, by padding the fabric with an aqueous solution of the product of the reaction of the dye with sodium sulfite, followed by mangling and heating at 110-115° C.

HOLDING AND TENSIONING OF YARN PACKAGES ON THE PERFORATED SPINDLES OF PACKAGE DYEING MACHINES. P. E. Jackson. USP 2 835 124, May 20, 1958. (3200)

DYEING WOOL. J. F. Laucius and R. A. Pearson (to E. I. du Pont de Nemours & Co.). USP 2 835 550, May 20, 1958. (3201)

Level, fast dyeings are obtained with neutral metalized azo dyes by treating the wool with a polyoxyalkylene glycol either before or during dyeing.

PROCESS FOR THE PRODUCTION OF COMPLEX COPPER COMPOUNDS OF DIRECT-DYEING DYESTUFFS ON THE FIBER. E. Kraehenbuehl (to Ciba Ltd). USP 2 840 444, June 24, 1958. (3202)

Cellulosic fibers are printed with a printing paste containing a direct-dyeing metalizable azo dyestuff of which the copper compound (containing cuprous thiocyanate) is sparingly soluble to insoluble in water.

MECHANICAL PROCESSES D 3

TENSIONING ROLLERS FOR FABRIC STRETCHING. H. Bechter (Switzerland). BP 787 995, Dec. 18, 1957. Through BCIRA 38: 99 (1958). (3203)

Roller for weft-way stretching of fabrics on a loom, or cutting, dyeing or finishing machine.

HEAT SETTING CRIMP IN SYNTHETIC YARNS. R. S. Gilchrist, E. P. Scragg, and D. A. E. Mattingley (to Klinger Mfg. Co. Ltd and E. Scragg & Sons Ltd). BP 788 526 and 788 527, Jan. 2, 1958. Through BCIRA 38: 115 (1958). (3204)

These inventions are primarily concerned with the heat treatment of yarns as a step in a crimping process of the false-twist type.

PORTABLE RE-ROLL, INSPECTION, MEASURING, AND CUTTING UNIT FOR RUGS. J. G. Halpin. USP 2 834 558, May 13, 1958. (3205)

HYDRAULICALLY CONTROLLED DIFFERENTIAL WEB TENSIONING MECHANISM. R. L. Bowen, Jr. USP 2 835 454, May 20, 1958. (3206)

APPARATUS FOR UNTWISTING FABRIC IN TWISTED ROPE FORM. W. J. Moorhouse and E. Wilford (to Bradford Dyers' Assoc. Ltd). USP 2 836 012, May 27, 1958. (3207)

Device which governs the operation of the twist detector of a fabric untwisting unit so that untwisting is actuated only when necessary.

SEAM OPERATED STOP MOTION FOR FOLDING OR CLOTH INSPECTING MACHINES. L. F. Remington (to Curtis & Marble Mach. Co.). USP 2 836 668, May 27, 1958. (3208)

EQUIPMENT FOR STORING AND HANDLING ROLLS OF CARPETING. C. C. Riemenschneider. USP 2 838 249, June 10, 1958. (3209)

ADJUSTABLE SPREADER BAR FOR CLOTH WINDING. J. L. Miller. USP 2 838 823, June 17, 1958. (3210)

FABRIC SPREADING ROLLER. H. Voegelin (to Fritz Buser Maschinen- und Apparatebau). USP 2 839 813, June 24, 1958. (3211)

Roller by means of which band-like webs can be laterally stretched and creases extending along the length of the web can be eliminated.

PLEATING APPARATUS. M. Roussos. USP 2 840 283, June 24, 1958. (3212)

Machine for permanently pleating manmade fabrics so that no damage occurs to the fabrics or to any designs or ornamentation on the fabrics.

DRYING D 4

DRYING PAPER OR TEXTILES. Schnellpressenfabrik Frankenthal Albert & Cie AG. BP 788 254, Dec. 23, 1957. Through BCIRA 38: 126 (1958). (3213)

The invention relates particularly to the drying of intaglio-printed paper or fabric by passage over a perforated drum in a hot chamber.

TENTERING MACHINE. Famatex GmbH. BP 789 559, Jan. 22, 1958. Through BCIRA 38: 156 (1958). (3214)

The invention is concerned particularly with a tenter drying machine having one or more superposed paths for the fabric. So that the parts may be readily accessible (for removing loose fiber, etc.) it is proposed to make the conveying mechanism into a lateral or middle section of the machine with the heating and ventilating systems at one or both sides.

FABRIC DRYING APPARATUS. J. Kögler (Germany). BP 790 627, Feb. 12, 1958. Through BCIRA 38: 189 (1958). (3215)

Drying or heating machine is heated directly by the exhaust gases from a gas turbine.

INTRODUCTION OF FABRICS INTO TENTERING MACHINES. H. Krantz and W. Krantz (Germany). BP 792 355, Mar. 26, 1958. Through BCIRA 38: 275 (1958). (3216)

Device for the pleated introduction of fabric into the clip or needle chains of tentering machines, having upper and lower feed rollers rotating at a peripheral speed faster than that of the chains, and a brush for pressing or guiding the fabric on to the needles or into the clips, comprises an endless belt driven by the upper feed roller and pressing the fabric against the lower roller on the path from the nip of the feed rollers to the point where the brush operates.

APPARATUS FOR DRYING AND CONDITIONING FIBROUS WATER-SOLUBLE CELLULOSE DERIVATIVES. F. Magnusson (to AB Svenska Flaktfabriken). USP 2 830 386, Apr. 15, 1958. (3217)

DRYING ROLL APPARATUS FOR CONTINUOUS DRYING OF YARN. J. L. Claiborne and W. F. Luther (to Dixie Mercerizing Co.). USP 2 834 860, May 13, 1958. (3218)

WILLOW DRYING APPARATUS. H. Fleissner and G. Fleissner (to Fleissner & Sohn). USP 2 835 047, May 20, 1958. (3219)

Willow or sieve drum dryer in which the thickness of the fiber lap increases as the drying progresses, thus making possible a dryer which is of considerably smaller dimensions than previous dryers of this type.

TESTING AND MEASUREMENT E

PORTABLE TENSIOMETER FOR DETERMINING TENSION IN MOVING WEB AND STRAND MATERIAL. R. W. McCullough. USP 2 833 145, May 6, 1958. (3220)

YARNS E 2

YARN TENSILE TESTER. R. H. Braunlich (to Am. Viscose Corp.). USP 2 834 204, May 13, 1958. (3221)

Improved apparatus for clamping yarn test samples consisting of a receptacle containing magnetizable metallic particles suspended in oil and surrounded by a magnetic field which can be energized to immobilize the sample in the receptacle.

FABRICS E 3

DEVICE FOR DETERMINING LIGHTFASTNESS OF A FABRIC OR A PAINT. Quarzlampen GmbH. BP 781 598, Aug. 21, 1957. Through BCIRA 37: 610 (1957). (3222)

The lightfastness tester described has the samples disposed coaxially and arranged to rotate so that different groups are alternately exposed and shielded.

LUSTER MEASUREMENT. R. Jeffries (to Brit. Rayon Research Assoc.). BP 791 477, Mar. 5, 1958. Through BCIRA 38: 248 (1958). (3223)

Means for following the course of a delustering treatment on a rayon fabric or yarn (wound in the form of a pad). The orientation/light intensity relationship is measured at an angle of collection in the satisfactory range, that is, within the range of incident and reflected beam angles over which the intensity/orientation curve exhibits well-defined peaks rising above the level of intensity of the diffusely reflected component. The optical arrangement is described in detail; the incident and reflected beams are both polarized by means of Polaroid to increase sensitivity, and intensities are measured by means of photoelectric instruments.

OTHER E 4

INSTRUMENTS FOR INDICATING OR MEASURING MOISTURE CONTENT OF MATERIALS. L. G. Toplis (to J. Lyons & Co. Ltd). BP 789 123, Jan. 15, 1958. (Addition to BP 687 472). Through BCIRA 38: 129 (1958). (3224)

The parent invention related to an electronic moisture meter for materials that could be packed into a test cell. The electrodes have now been modified into plane plates for testing bales of jute.

SAMPLER FOR DYEING MACHINES. W. A. Dawes and W. H. Copley (to Sir James Farmer Norton & Co. Ltd). USP 2 815 664, Dec. 10, 1957. (3225)

Device for obtaining fabric samples from a closed pressure vessel consists of a slidable tube placed in a fitting fastened to the wall of the dyeing vessel. The tube has means for cutting a fabric sample at one end and a valve on the other outside of the machine to permit samples to be ejected by the pressure of the dyeing machine.

INDUSTRIAL ENGINEERING F

MACHINERY AND MAINTENANCE F 1

CARRIAGE-MOUNTED FANS. F. Reiterer and L. Windisch (France). BP 763 317, Dec. 12, 1956. Through BCIRA 37: 668 (1957). (3226)

Means for extending the sweep of a fan that travels on an overhead runway for dislodging dust and fly in a textile mill.

CAMBER GRINDING MACHINES. S. W. Dronsfield (to Dronsfield Bros. Ltd). BP 786 756, Nov. 27, 1957. Through BCIRA 38: 16 (1958). (3227)

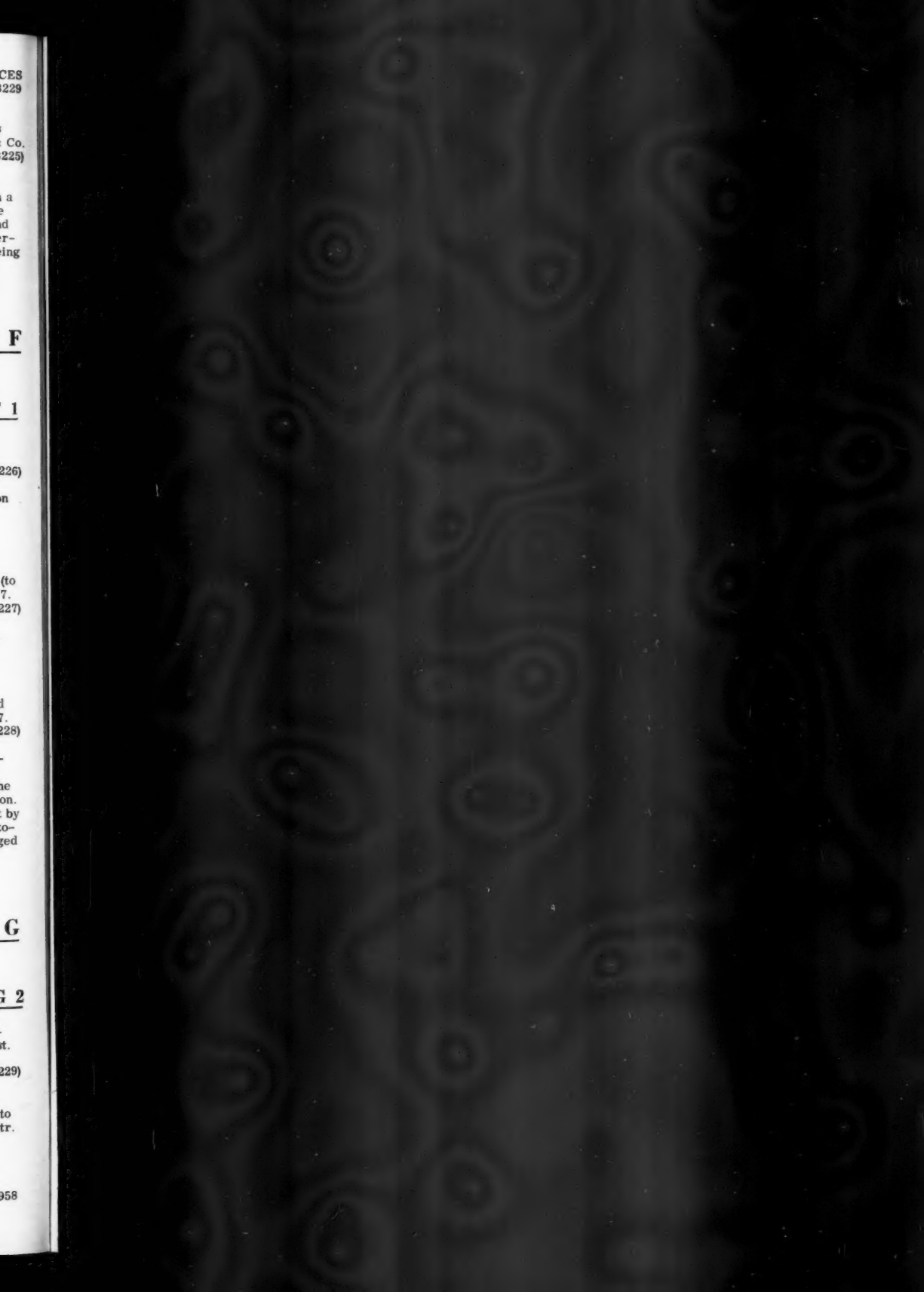
Machine for grinding calender rolls and the like with a slightly convex or concave contour.

SUCTION CLEANING APPARATUS. F. Reiterer and L. Windisch (France). BP 788 041, Dec. 18, 1957. Through BCIRA 38: 85 (1958). (3228)

Apparatus for removing dust and fly from textile machines comprises a main suction duct and numerous auxiliary ducts one behind the other and parallel to the main duct from which they are separated by a partition. Each auxiliary duct communicates with the main duct by a valved opening in the partition. The valves are automatically opened and closed according to a prearranged cycle, e.g. by cam action.

SCIENCES G

PHYSICS G 2

DISCHARGE OF STATIC ELECTRICITY FROM FABRICS AND OTHER DIELECTRIC MATERIALS. Inst. Textile de France. BP 769 769, Mar. 13, 1957. Through BCIRA 37: 200 (1957). (3229)

A stream of gas is ionized by contact with a charged metallic point and directed, by one or more jets, on to the material to be treated. See also BP 769 055 (abstr. 3088/57).